



Argentina - Photo by Jorgelina Suárez

A person's head emerges from a lake. They are looking directly into the camera, only their eyes and nose are above water, their dark wavy hair is wet and sprawls across their face. The camera is level with the lake surface.

Case Study

ThisEgg's motherEarth International

Creating and Collaborating Sustainably

Contents

About

Aims

Summary & Headline Reflections

Collaborating Internationally & Digitally

Conversations with Climate Scientists

Sustainable Costuming

Using the Theatre Green Book internationally: Quick Thoughts

Living & Filming In The Climate Emergency

Final Thoughts

About

motherEarth international is a ThisEgg project created by teams across the world. It is a series of new dance films and a podcast series responding to the climate and ecological crisis bringing together artists from the UK, Ukraine, Taiwan, Brazil, Argentina, India, Mexico, Indonesia and Denmark. The project is supported by the British Council's Creative Commissions for Climate Action, a global programme exploring climate change through art, science and digital technology.

motherEarth was originally a British Council Creative Commission for COP27, the 27th UN Climate Change Conference of the Parties. This annual conference brings together world leaders to accelerate action to reach the goals set out by the Paris Agreement and the UN Framework Convention on Climate Change. COP27 took place in Egypt 7-18 November, 2022. The theme for the commission was Climate Emergency, a situation in which urgent action is required to reduce or halt climate change and avoid potentially irreversible environmental damage resulting from it.

The project was coordinated digitally and the majority of activity took place between July and November 2022, with the launch coinciding with the start of COP27 on 7th November.

Aims

Josie Dale-Jones

I wanted to make something about the climate emergency that wasn't words and facts and science. Something that was about feeling, and something that helped to build empathy. I also wanted to make something that would punch people in the face a bit, that would make people want to do something. I think a lot is hidden from us, in the UK it is for sure. I think that we struggle, or I did at least, to engage with the climate emergency when we think about it as only a thing happening to the planet and animals and nature. It is happening to us. And so I want to make something that makes it about humans. Because I think people might respond differently if it is. We're selfish really.

The idea for the film was partly because of lockdown, partly because I love film, partly because I think it can reach more people than theatre can, partly because I want to show real locations, partly because it is a way to connect and collaborate with people around the world (that's you), because this is a global issue, and partly because trying this feels like a possibility for new creative processes that are environmentally sustainable.

Summary

This case study is a bringing together of the sustainable intentions and methods used by the artists, researchers and collaborators involved in the project. We hope that this case study will provide useful resources and examples for others creating similar projects. Capturing feedback from those involved in the project and writing them up allows us to draw out things that worked well and challenges that could be approached differently in future. We also hope to give an insight into how the artists involved in the project were experiencing the climate emergency while making this work.

The feedback here is mostly qualitative and reflects on the processes behind creating the films. This evaluation advocates for conversations between artists and climate researchers, as well as for sustainable costume design and making processes such as recycling textiles and using natural dyes.

In terms of quantitative evaluation, we explored collecting data about the carbon footprint of working digitally to develop and coordinate the project. There is detailed information available online about how to calculate the CO₂e emissions for video conference calls, but we found that calculating the impact of international video calls is very difficult. This is because the calculations rely on knowing details about how electricity is produced in each locality and this information is not widely available online. However, estimates about the carbon cost of emails and advice about reducing that impact is readily available thanks to guidance from The Carbon Literacy Trust.

Looking into the carbon footprint of working digitally also made us reflect on access to the internet, which is dependent on access to electricity. This was not a given in some of the countries where films were being made, due to extreme weather events and is an example of the direct impact of the climate crisis on this project.

We offered the international teams resources from the Theatre Green Book's Book 1: Sustainable Productions, including templates designed to calculate the environmental impact of the materials used to produce their films.¹ Although the materials templates didn't prove practical for the teams on this occasion, we heard back that the handbook (Book 1) was useful for some teams.

There are lots of similarities between film and theatre production. And there are lots of differences too. The people making these films mostly worked in theatre and so using what we knew as well as the Theatre Green Book felt like a structure we could easily understand. For people working in film there are more specific guidelines, for example [albert](#). If we'd have known more about filming and the specific ways this medium can impact the environment (for example the footprint of digital technologies, the making, sourcing, charging and disposal of batteries etc), we could have been better prepared to limit our energy use.

For this project, practical skill sharing that directly contributed to the process of making the films was more successful than data collection - we received more feedback about sustainable practices such as the natural dye workshop and the conversations between artists and researchers than figures listing the number of materials that were recycled, for example.

Headline Reflections

- Working digitally requires access to the Internet and electricity. This was not a given in all of the countries involved during this project due to disasters caused by global warming.
- Working digitally brings creatives from around the world together without the CO₂e emissions of flying. Using film also allows those artists' contexts to be showcased.

¹ The **Theatre Green Book** is an initiative coordinated by the Theatre Trust in collaboration with sustainability experts Buro Happold, who are an engineering consultancy. Industry artists, technicians and staff from venues across the country were consulted to develop guidance to help the industry work more sustainably. In three volumes, the Green Book sets standards for making productions sustainably, for making theatre buildings sustainable, and for improving operations like catering and front of house. You can find Book One - the guide to green productions [here](#).

However, there is no substitute for face-to-face when it comes to communicating creative ideas and logistical details.

- Conversations between artists and climate researchers were fruitful and contributed to the artistic output. These conversations made research about the artists' contexts accessible as there is a bias towards western-centric research available online.
 - Sharing sustainable skills specific to a team or department (for example, costume & wardrobe) upskilled the creatives, who used those skills for the project and will do again in the future. A process that encouraged skill sharing from multiple teams would have been more equitable and facilitated deeper connection between collaborators.
 - Calculating the CO₂e emissions of working digitally (using emails and Zoom for video calls) is possible, however it is challenging to calculate the CO₂e emissions of international Zoom calls.
-

Collaborating Internationally & Digitally

The teams behind motherEarth international collaborated digitally from their locations around the world, using Zoom, email and WhatsApp. There was a conscious choice not to fly.

It is common sense that the amount of CO₂ emitted as a result of a single Zoom call is smaller than the impact of a flight. However, using the internet has a carbon cost, primarily due to the energy demanded by data centres. In 2018, digital technologies accounted for 3.7% of greenhouse gas emissions.² In 2017, the aviation industry in Europe accounted for 3.8% of total CO₂e emissions.³

We thought it would be interesting to bring together data that gave us a sense of the digital carbon footprint of the project. There are many factors in measuring the environmental impact of digital technologies, including the materials used in manufacturing the device you are using, whether the electricity powering your device is from a renewable source and whether the electricity powering the server that provides your internet access is from a renewable source. Data centres are also energy intensive due to the need for intensive air conditioning.⁴

Zoom

How do you calculate the carbon emissions of a Zoom call?

David Mytton, a DPhil Researcher at Oxford University's e-Research Centre, has written a really [useful blog](#) about calculating the CO₂ produced by a Zoom call. He notes that there are many elements in calculating the impact of a call but bases his calculation on the amount of electricity required for a Zoom meeting multiplied by the UK electricity emissions factor.

What is an electricity emissions factor?

² You can find out more about ways to reduce the impact of your digital habits in this [BBC article](#).

³ https://climate.ec.europa.eu/eu-action/transport-emissions/reducing-emissions-aviation_en

⁴ <https://www.iea.org/reports/data-centres-and-data-transmission-networks>

It is the amount of CO2 linked to the production of electricity. So in the UK, the most up-to-date figure for the emissions produced when we generate electricity is 0.28839 kgCO2 per kWh.

Different countries and different regions will have electricity emissions factors that vary according to the energy sources that are dominant in that area. For example, in the UK, the primary energy source used to generate electricity is gas whereas in Denmark, the primary energy source is wind.⁵ As wind is a renewable energy source, the electricity emissions factor in Denmark will be lower than the UK.

How do you calculate the amount of electricity used per Zoom call?

David has done the maths:

a 1 hour 1:1 conversation could generate 1.08 – 3.24GB of network traffic using 0.0162 – 0.0486 kWh of electricity.

For a group call between 6 people, that could generate 4.86 – 14.85GB of traffic and use 0.0729 – 0.22275 kWh of electricity.

At the upper limit, Zoom can support up to 1,000 participants (and has gone up to 100,000 in special situations), which could generate a range of 810 – 2,475GB of network traffic using 12.15 – 37.125 kWh of electricity.

Fortunately, UtilityBidder (an independent utility tariff advice service for businesses) has taken David's calculation and created a wonderful carbon calculator to help you work out the amount of electricity required for a Zoom meeting multiplied by the UK electricity emissions factor.

For example, a call between two people in the UK for 2 hours uses 0.03kWh of electricity and 0.01 kg of CO2 per week of video calls. That's equivalent to driving 0.04 miles in a petrol car.

UtilityBidder's calculator is great if you are trying to calculate how much CO2 emissions are produced by a Zoom call between callers in the UK. However, the calculator does not include calls between different countries because, as we have seen, the electricity emissions factor varies in each locality. As David explains, 'location matters'.

What does this mean for motherEarth?

As most of the Zoom calls made for the motherEarth project were made between collaborators in different localities, the calculation becomes very complicated.

Also, it is difficult to find the data about each country's electricity emissions factor.⁶ Interestingly, data about electricity emissions in large economies with histories of colonialism, including the USA, Australia, Canada and the UK is available, while data about countries whose citizens are experiencing the effects of climate change most acutely, including some of the countries involved in this project, is difficult to find.

⁵ Explore global energy uses, generation and capacity using Ember's free data explorer: <https://ember-climate.org/data/data-explorer/>

⁶ You can find the factors for the USA, Australia and Canada, [here](#), under 'Generation Factors'.

This speaks to a reflection made by the team in India about western-centric climate data available online. The team in India wanted to focus on soil preservation as a theme. They found that ‘a lot of the research online was targeted towards the challenges of a western world’. They therefore found the conversation with a climate scientist, facilitated by the project, useful for filling this problematic gap.

As the data about electricity emissions factors in the countries involved in the project wasn’t available, and the calculation for international calls is complicated, we couldn’t calculate the amount of CO2 produced by the Zoom calls made in this project, although we have the tools to do that in future if we wanted to. David’s article and the carbon calculator are very useful if you are trying to work out the amount of CO2 emitted by using Zoom to connect collaborators who are all in the UK, or another country with a known electricity emissions factor.

A final note on electricity - several of the teams experienced extreme weather events while they were making their films (more about this below). These events had an impact on teams’ access to electricity. From July to September 2022, rainfall across Indonesia was higher than the thirty-year long-term average.⁷ The Indonesian National Disaster Management Agency reported at least 634 disasters between July and September 2022 caused by flooding, landslides, storms and cyclones. The first Zoom workshop for motherEarth took place on 5 July and the submission date for footage was 5 September. The team in Indonesia struggled to upload their footage because access to the internet to upload large files was limited. Intermittent electricity supply would also have impacted the team’s ability to charge cameras and use filming equipment, as well as take part in projection coordinating Zoom calls and emails.

Emails

According to The Carbon Literacy Project, the CO2 emissions caused by an email range from 0.03g and 26g.⁸ The most useful, or carbon efficient, email takes 3 minutes to write and 1 minute to read and you can reduce the emissions of your email by including links to large files instead of attachments.

Email Type	Emissions (CO2e)
Spam email picked up by your filters	0.03 g
Short email sent and received on a phone	0.2 g
Short email sent and received on a laptop	0.3 g
Long email that takes 10 minutes to write and 3 minutes to read sent and received on a laptop	17 g

⁷ ‘It was reported that 41 people died, 13 people went missing, 65 people were physically injured, and 514 thousand people were impacted by disasters and consequently displaced. The damages to houses and public facilities were 21% higher compared to the same period last year.’

<https://reliefweb.int/report/indonesia/indonesia-impact-monitoring-hydrometeorological-hazards-july-september-q3-2022>

⁸ <https://carbonliteracy.com/the-carbon-cost-of-an-email/>

Email blast that takes 10 minutes to write and sent to 100 people, of whom 1 reads it and the other 99 glance at it for 3 seconds to decide that they should ignore it

@ The Carbon Literacy Project

The majority of emails sent by the project co-ordinators were ‘Long email that takes 10 minutes to write and 3 minutes to read sent and received on a laptop’. The producers included links rather than large attachments with key information that could be added to by team members collaboratively, further reducing the number of emails.

Flights

Out of interest, we did the calculations for how much CO2 would have been emitted if the creative team had taken economy return trips to the UK to collaborate. We used the [carbon calculator developed by the ICAO](#), a UN aviation agency. Here are the figures for some of the teams - the number of passengers is based on the number of members in each team.

Departure Country	Number of Passengers	Aircraft Fuel Burn/journey (KG)	Passenger CO ₂ /pax/leg (KG)
Argentina	18	91279.5	592.2
Brazil	9	111787.0	412.9
India	5	88708.2	266.0
Indonesia	10	288269.1	370.2
Mexico	11	107995.4	453.2

a. Fuel Burn information provided are for 1 aircraft per leg

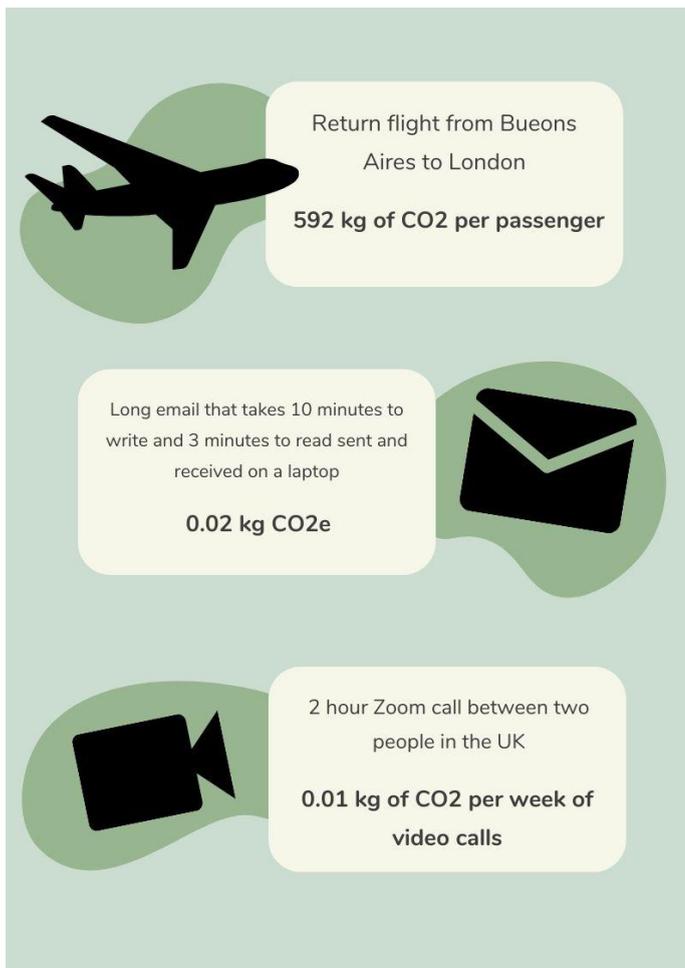
b. Aircraft Fuel Burn/journey = \sum Aircraft Fuel Burn/leg

This is slightly misleading because the groups might have been smaller if they had been travelling internationally.

We chose the UK as a meeting point because the project was funded by the British Council and the project leads were based in the UK. However we are aware that the nature of the grant centres the UK in this international project. Although flying wasn't in line with the sustainable aims of the project, working together in-person rather than remotely would have allowed more time and space to discuss and address this hierarchy, to flatten the process and make the relationships more horizontal.

Website

The motherEarth International website was designed and developed by Formula. The aims for this site were to host the films and podcasts, for the website to be accessible internationally and to have a low carbon footprint. Building a website with sustainable aims was a useful piece of learning from a mini-site developed for a previous ThisEgg project. The producers asked for a



green website host, meaning that the host used sustainable energy, and the developers were happy to do this, reflecting that this request was a first and they would take it forward into future projects. The design is simple and uses infographics instead of text as navigators. This is to make the website friendly in terms of access needs as well as for users who speak and read in different languages. The blurred visuals on the main page were inspired by heat maps.

We ran the website URL through the [Website Carbon Calculator](#) and found that it is cleaner than 94% of webpages tested, producing 0.07g of CO2 everytime someone visits.

Reflections

This infographic is a layperson's guide to ways of working. Comparing the CO2 emissions of one email, a Zoom call, a flight and a visit to a webpage is not precise because the units are different and of

course one email does not compare to the multiple meetings, rehearsals and conversations that might be had on a visit from Buenos Aires to London or vice versa. However, working digitally on a project over a defined time period is likely to have a smaller carbon footprint than flying internationally.

We asked team members to reflect on the positives and challenges of international, digital collaboration. Creatives reflected that they enjoyed being able to connect with artists around the world 'sharing of perspectives that offer insight to attitudes and practices' and 'seeing the different ways [fellow costume designers] interpreted the brief'. Working remotely also provided opportunities for 'multi-discipline collaboration' and to embrace film as a medium. These themes of connectivity recur in the title chosen for the podcast output of the project, 'What's Mine is Yours'.

Project leads were creative in the ways they communicate with the wider team. As well as Zoom calls and emails, sharing music in Zoom calls was used to make the digital space welcoming and the themes for the project were developed through discussion and collaborative digital platforms like Google Jam Board. Costume led, Lydia Higginson used moodboards to share visuals for costume design and Katrina Wilde ran a Zoom call from her studio, showing the group her process of using natural dyes. You can find the Jam Boards at the end of this document.

However, challenges to working internationally and digitally included communication. The international team spoke at least 7 languages - huge thanks must go to the (self-elected team members who also worked as) translators who supported communication between artists. Naturally though team members said that there were 'cases of 'lost in translation' or partial understanding'. Working digitally also led to logistical challenges. Artists reflected that working

digitally 'ensued small cases of missed coordination' and that pre-production could take longer because of not being in the same place.

Digital platforms made this project possible and also presented unique challenges to communicating and organisation. Connecting digitally certainly had a lower carbon impact than large groups flying and also gave the project its unique place-based identity. It is important to reflect on access to electricity and internet supply when working internationally.



Mexico - Photo by Monica Garcia

A dark green river flanked by lush green trees with lily pads floating atop the water. In the centre of the river, a long green canoe, a person stands inside, their shoulders adorned with six large blue plastic water containers. They hold an orange plastic water container in their right hand. Their head sags and their long black hair covers their face.

Conversations with Climate Scientists

ThisEgg partnered with the University of Cambridge to connect the creative teams with climate scientists based at the university. The teams in Mexico and India both reached out, seeking conversations with researchers. The team in Mexico wanted to explore the status of climate research in Mexico and the scarcity of water. The team in India were interested in finding out more about soil preservation.

We were curious to see how the conversations between artists and climate researchers had impacted the films and the practice of both artist and researcher going forward.

India

Reflections from the team in India about how the conversations with climate scientists informed their practice:

It allowed us clarity on which aspect of soil preservation we, as Indians, needed to focus on. Because a lot of the research online was targeted towards the challenges of a western world, the conversation with the scientist enabled us to streamline the readings and R&D we had done.

Mexico

Violeta Luna, Producer/Lead Artist/Performer:

I want to share that the conversations I had with the researchers were very significant, first because of all the important work that they are developing from their areas of expertise, which although it is from a scientific perspective, it is also from a creative place, and that unites us, another way, perhaps, of making art. I believe that in the creative process it is extremely important to establish dialogues with other disciplines and areas, to create interdisciplinary languages that allow us to build more complex narratives.

Second, it was very gratifying to know more about the work that women are doing in the field of science. The gender perspective is essential in my artistic work and this film reflects those relationships. Women are not only caretakers and preservers of ancestral memory, but building from that, they are also proposing studies and strategies to counteract climate change moving forward.

There were many things in the conversations that surprised me, and I want to say that they also alarmed me, since there is an urgency to act and find solutions to the overwhelming pace of climate change and to have the hope that every effort that one makes from our spaces are micropolitical acts to better understand each other and in solidarity, build a better world.

It's amazing how everything is interconnected. In other words, we talk about the issue of water and how the lack or excess of it is linked to climate change - with floods, droughts, pollution and misuse of resources - and how this affects the socio-economic aspects of the life of our communities... the lack of water generates drought, and this generates a poor harvest, and that generates stress and stress generates violence. In other words, we cannot think of global warming as something isolated, but rather, it impacts all areas of life.

Although as a team we already had thought about the places we were going to work on, I think that opening to listening to those who are working with concrete actions helped us to build images, and to reflect on the fact that those of us who have access to a space should use it for the benefit of our communities. In our case, either through an image or a choreography.

Although the behavior of human beings has always impacted our climate and this has caused major disasters, I think it is important to appreciate that humans have also creatively generated ways to continue to preserve life. I am happy and inspired by the opportunity presented by this project to be part of the latter.

Violeta was paired with Dr Stacy Carolin, who also gave her reflection on the exchange:

I spoke with Violeta Luna over a video call on 18 August. From what I recall, the conversation was mainly focused on me explaining my understanding of the state of climate change research in Mexico— what researchers do know about past, current, and future rainfall projections, and what researchers remain uncertain about. I also discussed what type of research I do particularly with regards to climate change (I study the chemistry of cave rocks in the Yucatan in order to construct past records of rainfall changes). Violeta was very interested in the relation between water availability and ancient and historic societal developments in Mexico. In summary, she was

interested in improving her knowledge on climate change in Mexico, which could then be reflected in her rendition piece.

I feel the interaction between the artists and the researchers is an important feature of the MotherEarth theatre idea. I offered to provide Violeta with contact information of additional researchers I felt were possibly more relevant to her interests than myself, but she also mentioned that she had talked to several researchers, not just myself, which I am happy happened. She was very thankful for my time, and a pleasure to speak with.

It is clear that the conversation between Violeta and Dr Carolin contributed to the development of the Mexico team's film, 'Water Lines', which juxtaposes visuals of standing water in a natural environment with water tanks and dry taps in the built environment. As Violeta outlines, the film also foregrounds women's interaction with an altered climate - there are recurring images of the female performers balancing and carrying water, while choreography includes images of gagging. There is a clear through line between the conversations between artist and research and the film in content and imagery, as well as contextually with women performers and researchers collaborating and championing communication about the climate crisis.

It seems as though the conversations with climate scientists supported the film-makers explore their themes and develop existing ideas further. The link with a climate scientist also combatted the western-bias on climate research that the team in India experienced.



UK - Photo by Camilla Greenwell

Five people are dancing in the middle of a field with long dry grass and trees behind. They all have their backs to the camera, all have their left arms held out from their bodies and bent at the elbow and right arm held out and raised above their head, their hair is swishing, the dance move looks energetic. They are dressed in shades of brown, pink, beige and orange.

Sustainable Costuming

When the filming was finished and the films were released, we sent a feedback form to all collaborators, asking for their reflections on the positives and challenges of working sustainably. Interestingly, most of the feedback came from costume designers, perhaps because there was a clear and practical 'green' brief for the designers to work with: sourcing existing materials for their designs rather than virgin products, and to using natural dyeing methods to unit found items into a visual language that would be coherent across the project teams.

The costumes for the motherEath project were led by Lydia Higginson, with a costume designer in each team: Monserrath Brenes (Mexico), Virginia Pilati of 163 Moda, Casa Amarela Acervo and Teatro 4Garoupas (Brazil), Fitri Kenari (Indonesia), Amanda Mujica (Argentina), Ramesh Yadav (India) and Lydia Higginson (UK). Natural dye artist Katrina Wilde led a Zoom workshop with designers demonstrating her methods and discussing the food or plant waste specific to each locality that could be used:

- *Brazilwood, Cutch, (Catechu), Annatto seeds, Cochineal and Indigo, (for South America)*
 - *Indigo, Marigold, Turmeric, Madder, Henna, (For South/South-east / East Asia) Lac (another scale insect like Cochineal, given bright pinks, reds and purples, from Shellac, India)*
- *Weld, Woad, Marigold, Chamomile, Walnut (for Europe, weld grows abundantly, but also is protected so only take small amounts - good for bundle dyeing)*

In their feedback, the costume designers from the UK and Indonesia reflected on the element of luck and coincidence needed to work sustainably, as both a positive and a challenging aspect:

'I really enjoy scouting out recycled fabrics. I like the challenge of making the most I can from waste. On this occasion [working sustainably] fell into place really easily because a friend of mine had access to a load of curtains that were being chucked out by Windsor Castle and Buckingham Palace'

'As always, it's random luck depending on if you find what you need at the time!'

Designers reflected that working with natural dyes encouraged a connection with the seasons in the designers' localities:

'Because of the time of year plants and flowers were readily available from my sister's allotment and neighbouring gardens. I used marigold, bark, turmeric, blackberries, nettle, rubbed leaves, rose petals and onion skins to get the colours I wanted.'

Reflecting further on the natural dye workshop, both artists reflected that they found this skill sharing 'really interesting and provided that 'natural' look for the dance film project' and although there was concern about the amount of water required, waste water from this process did not

pollute the water system. Natural dye is a sustainable method both artists said they would take into future work:

'I enjoyed focusing on the new natural dying skills Katrina taught us and will be sure to use them again'

'I would very much like to learn more about natural dyeing as a worthwhile artistic resource that can be further utilized as a designer.'

Using found as opposed to buying virgin materials reduced the carbon footprint of the project at the point of source and disposal - the natural dyes are often by-products of organic material and unlike synthetic dyes do not produce additional pollution in their production: 20% of freshwater pollution comes from textile treatment and dyeing.⁹ Natural dyes are also more fugitive than synthetic dyes, meaning that the items can be redyed and reworked again in the future.

Not all of the costume designers used natural dye for their films and unfortunately we don't have feedback to shed light on whether those were creative or logistical decisions. However, the designers who did give us feedback also used natural dyes, which suggests that engaging with this new skill made them want to reflect on the sustainability of their practice. This is a useful piece of learning to take forward - when aiming to increase sustainable engagement and processes in a project, providing practical workshops and skill sharings specific to artists is effective both for that project, evaluation of the project and for the artists' future work.

Using the Theatre Green Book for an international project: Quick Thoughts

Josie and I have used the Theatre Green Book guidance and the material inventories to measure how sustainable productions are before. You can find out more about what we learnt on our report about trailing the guidance for ThisEgg's show for families, Me And Me Bee.

We knew that the guidance wouldn't be a good fit for everyone involved in this project, because it's UK theatre process inclined and these were films rather than shows. We had adapted some of the inventories for film because Me And My Bee was filmed for a digital version of the show. I was curious about how useful the guidance and inventories would be for the teams around the world and how their contexts might be different from the UK, as well as what resources might be available where they were working. We agreed that using the templates would be optional, did an introduction to the Green Book in the first Sustainability Workshop and shared resources, including templates designed to calculate the environmental impact of the materials used to produce their films, such as cameras, lights etc.

⁹ <https://www.sciencemuseum.org.uk/objects-and-stories/chemistry/colourful-chemistry-artificial-dyes>

Although none of the teams shared a completed material inventory with us (which was totally fine, they already had a lot going on!), we did hear back that the resources had been useful. The team in India said that they now knew how to calculate their carbon footprint using the guidance and would take forward the skills of finding 'alternatives that are more environmentally sustainable'. Great news!

I'm interested to see if there are more resources out there that might make working internationally to the same sustainable aims more possible, easier to communicate or share and record.



Indonesia - Photo by Sito Adi Anom & Ariyanto Nugroho 2

A person dressed in a big white dress, wearing a wig of long curly red hair, aviator goggles, and carrying enormous colourful bouquets of flowers is leaping high into the air from a swathe of grey cloth that is draped on the ground. There is a natural rock wall behind them, large boulders and a mound of broken down stone in their vicinity.

Living & Filming In The Climate Emergency

When we were checking in with teams a week or two ahead of their filming date, we were met with the reality of the climate crisis. In Argentina, they changed filming locations because of extreme weather. In the UK, we had just experienced the hottest year on record and wanted to highlight this over some of the other issues we'd been discussing, so we changed location to better articulate the current circumstances. In Indonesia, there were storms and landslides, so the filming team had to be far more flexible and work around when it was safe to film. In India, they were in the midst of monsoon season. In Taiwan, there was a typhoon. Everyone had to be adaptable.

We spoke about our proximity to the theme of what we were making. About how it felt, about how it affected with what we were making, about a feeling of hopelessness, but also the power in being together and facing it directly. About knowing that everyone was, in some way, experiencing the climate emergency.



BTS Brazil - Photo by Claudete Luginieski

There are three dancers each with their right arm raised. They look small in a large warehouse space. There is an industrial digger type vehicle throwing shreds of white paper over the dancers. In the background there are huge blocks of squashed green plastic bottles. Outside the warehouse are piles of scrap metal and more vehicles.

Final Thoughts

If you could make a call to action to your audiences, what would it be?

- *To self-reflect and contextualise [the] condition of [one's] own 'body' to [the] current environment (nature, climate)*
- *my call would be to those in positions of power to prioritise the climate emergency above all else.*

motherEarth international invited collaborators from around the world to share their lived experience of climate change and position their embodied experience at the forefront of the offer to audiences. Through Zoom calls, film and audio, the creative teams have been able to share their concerns, priorities and hopes in the context of the climate crisis.

At the beginning of the process, the producers used Jam Boards to get everyone thinking about their response to the climate crisis. You can see a couple of these collaborative boards below.

Through reflecting on the sustainable aims for the project, we can get a sense of where these themes found resonance in the process of making the work, as well as in the films and podcasts. We can get a sense that working digitally on a defined project probably has a lower carbon footprint than flying internationally. But more importantly, we see that access to digital working isn't a level playing field and is directly impacted by the climate crisis. Reviewing the impact of conversations with climate scientists, we also see the bias towards western-centric research that the team in India experienced. This links to another reflection from the Indonesian team about class and privilege:

Perhaps this was already mentioned, but environmental sustainability tends to be practised by the more elite community (upper middle class). Unfortunately, practicality will continue to dominate. Yet it is with great pleasure that the costume designer both enjoyed and would consider natural dyes in the future.

On a micro-scale, the time and money needed to work sustainably was something that Josie and I found through working on another ThisEgg show, Me And My Bee. We learnt that planning to work sustainably takes time and the team's team must be budgeted for. **How do we make sustainability accessible?**

Reflecting on reflection: bringing a large, international team together to feedback on the process of making the work is tricky, even when you schedule time for a get-together and include it in the contract. We're not sure what the solution is here, maybe the challenge lies in the added effort that we feel when trying to find sustainable solutions. However, I'm very grateful to the artists who shared their thoughts on the process, particularly their focus on working with a sustainable focus. We can see from their thoughts that having clear sustainable aims, including using natural dyes, and consulting with climate researchers contributed to their awareness of sustainable processes and knowledge of the climate crisis. It also seems as though this impact will be carried forward. Talking about the research and conversation with the climate scientist, the team from India reflected that they 'hope to incorporate going forward for most of the other arts projects that we as an organisation undertake.'

We'll round this off with a thought from Ari Ersandi, the choreographer of the Indonesian team, who were really generous with their feedback. Ari shares how the project shifted his practice, the attention and attunement to environment that the process gave him:

'The overall process was really interesting, enabling me to read nature more closely as a source for further translation into choreography - creating 'markings' through improvisational methods. For example I'm more aware of the unique dynamics of a given day - the transition from morning, afternoon, and evening that offer different visuals and sounds. The same animal would provide a different sound in response to the environment which the human dancing body can also respond to. It's not about looking for the sensation, but it's about articulating the sensation.'