

Preliminary Notes IETM Galway Satellite 2020 Meeting

In collaboration with Galway 2020, NUI Galway, and Theatre Forum

2-3 December 2020 Galway

Introduction

Climate change is happening now, and accelerating fast. It is the largest of all 'common pool resource' problems¹, which can only be addressed by collective action: we all share the atmosphere, which is essential to our survival; one country's fate is dependent on others. Storytelling and theatre have, from their roots around the campfires of hunter-gatherers, been a social as well as an artistic activity, building community, bringing people together to share experiences, think and understand collectively as well as individually. The delay to November 2021 of [COP26](#), the most important climate change conference yet, alongside commitments by China, the EU and now the USA, mean that 2021 is a crucial year for collective climate action, when every country needs to commit to far-reaching carbon reduction targets and plans to adapt to the impacts of climate change². The climate emergency, and the performing arts' role in addressing it, is therefore a fitting theme for IETM's and Theatre Forum's joint meeting in December 2020 on the eve of this crucial year.

These preliminary notes provide some background information to the sessions at the meeting. We've tried to explain some of the terms that may come up, make sure everyone knows the wider climate change context that the performing arts sector is working within, and identify some of the things the performing arts both should do and can do to play their part in addressing the climate emergency. We don't provide the detail, which is available elsewhere³, but this should give you the overview.

Climate change – some basics (forgive us if you know this already!)

Anthropogenic – or human-induced – climate change is the global phenomenon of the long-term shift in global and regional climate patterns (as opposed to weather patterns, which can change from day to day) caused by an increase in the 'greenhouse gases' (GHGs) in the atmosphere. The otherwise freezing cold planet earth is heated to a liveable temperature by the sun: ultraviolet light from the sun largely passes through our global atmosphere unchanged but when it hits something only some light is reflected as light whilst some is turned into (infrared) heat (just as an actor gets hot under stage lighting at the same time as the audience sees the light reflected off them). Some of this heat passes through the atmosphere into space but the GHGs in the atmosphere are able to trap heat, which has a longer wavelength than ultraviolet light, warming the atmosphere and the planet. More GHGs = more warming and since the industrial revolution

¹ 'A [common pool resource](#) [in economics] is a resource that benefits a group of people, but which provides diminished benefits to everyone if each individual pursues his or her own self-interest. The value of a common pool resource can be reduced through overuse because the supply of the resource is not unlimited, and using more than can be replenished can result in scarcity.' From <https://www.investopedia.com/terms/c/common-pool-resource.asp>

² Each country has to update its Nationally Determined Contributions that will enable the targets under the Paris Agreement to be met, and COP26 is an important step in that process <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement/nationally-determined-contributions-ndcs>

³ See for example www.creativecarbonscotland.com; www.greenarts.ie; www.juliesbicycle.com, <http://greentrack.be/> amongst others, but also seek advice locally which will be relevant to your country. It may not be arts-focused, but much of what you need is covered by more general agencies working on climate change and energy reduction.

the concentration of the main one, carbon dioxide or CO₂, has increased from around 240 to over 400 parts per million, mostly through the burning of fossil fuels (oil, gas, coal, peat etc) for heat, power and travel. Agriculture and deforestation and the rotting of organic waste also contribute methane and nitrous oxide, both even more powerful GHGs⁴.

The global temperature has therefore already warmed by around 1°C since pre-industrial times. Although this sounds relatively benign it has already significantly changed our climate, leading to devastating floods, making some areas unusable or uninhabitable, raising sea-levels and causing the wildfires, heatwaves, droughts and severe storms that we have become used to at home and abroad. It also exacerbates biodiversity loss and many other physical systems on which humanity as well as all other species depend. Warming of 1.5°C would have devastating impacts on human life and biodiversity.⁵ Without significant action by 2050 we are currently on track for warming of well over 3°C. The good news is that much of the increase of GHGs has occurred since 1975, so with urgent, concerted effort we can reduce our GHG output just as quickly.

The context for the performing arts

Action on climate change at the local, individual and organisational level fits into a nested system of agreements and regulation and aligns with other frameworks such as the Sustainable Development Goals. The United Nations Framework Convention on Climate Change ([UNFCCC](#)) is the global framework of which the [Paris Agreement](#), signed by nearly every country in 2015, is the most recent and important element. (Very unusually, and this reflects a recognition of the gravity of the issue, the Agreement was also ratified by national governments in months rather than the usual years.) The COP is the annual Conference of the Parties to the UNFCCC: the Paris Agreement was the first to agree a common target of a maximum 2°C of warming with the aim of limiting it to 1.5°C. This has led to numerous targets, regulations and directives from individual nations and the EU, amongst others. Within these, cities, regions, towns and industries are setting their own targets and objectives, with much of the real action occurring at city and local authority level, as these often have both the challenges the within their areas and the ability to do stuff on the ground⁶.

The UN's [Sustainable Development Goals](#), adopted by some governments as guiding principles for legislation and action, include Goal 13 on climate change but are also interlocking, with many others including goals on gender and equalities, clean water, sustainable cities etc, relying on and contributing to action on climate change.

Through national, regional and local governments, therefore, the regulations will affect the arts, and particularly subsidised organisations. The Scottish cultural development agency Creative Scotland, working with Creative Carbon Scotland, has made carbon reduction (not just carbon reporting) a condition of core funding for arts organisations in line with Scotland's world-leading climate change legislation; in Ireland the [Green Arts Initiative Ireland](#), a sister organisation to the [GAI](#) in Scotland, is taking up the challenge and recent funding announcements by the Ministry of Culture, Gaeltacht, Sport and Media indicate a strong commitment to this work; and Arts Council England/[Julie's Bicycle](#) do similar work in England. In many EU and other countries, similar approaches are developing, with voluntary and regional schemes in Europe, North America and Australia.

⁴ All GHGs are combined and counted using the term CO₂-e or carbon dioxide equivalent, where for example methane has a 'global warming potential' of around 25 times that of CO₂, so a kg of methane will be counted as 25kg CO₂-e (<https://climatechangeconnection.org/emissions/co2-equivalents/>)

⁵ <https://climate.nasa.gov/news/2865/a-degree-of-concern-why-global-temperatures-matter/>

⁶ See for example <https://www.covenantofmayors.eu/>

Climate Justice

Climate change also intersects with other issues important to the performing arts. It exacerbates inequalities globally and locally: the least wealthy countries, regions and individuals, which have contributed least to the GHG increase, are those most affected by climate change, experiencing the most severe impacts and least able to protect themselves against it. For example women are often those who have to deal with reduced water availability, increased food prices or damage by flooding, yet they are least likely to have burned the fuel in their cars or consumed the goods contributing to GHG levels – and this applies as much in rural and urban Western Europe as it does in poorer nations. The COVID-19 pandemic has demonstrated all too clearly how inequality is heightened in times of global crisis, and climate change is no different.

The performing arts are not only going to have to take note, therefore, but they *should*.

Taking all the above into account it is clear that the performing arts need to act. The question is not just what *should* our organisations do, or indeed what will they be *required* to do, but what *could* they do? Many of the actions we need to take are similar to those of other, non-cultural sectors, such as carbon reduction. But the performing arts, even amongst other cultural fields, offers great opportunities for influencing society and could play an even greater role. First, however, let's look at the basics.

Net-zero for the performing arts

The UNFCCC commissioned the Intergovernmental Panel on Climate Change (or [IPCC](#), a body that brings together scientists from all over the world to provide objective advice on climate change) to report on what would be required to achieve the 1.5°C target. In 2018 the IPCC said it was possible, but only through "rapid and far-reaching transitions in energy, land, urban and infrastructure..., and industrial systems". In order to achieve the 1.5 °C target, CO₂ emissions must reach net-zero by around 2050⁷. But what does net-zero mean – and specifically, what does it mean for the cultural sector?

Effectively for the cultural sector, net-zero means we must remove **all** the GHG emissions from what we do. Some emissions will never be eliminated from human activity but broadly these will be allocated to fields which are essential to society but where the emissions *can't* be eliminated, such as agriculture, some industrial processes and (in the medium term, at least) aviation. These will be 'offset' by GHG removal through restoration of peat bogs, increases in forestry and technological methods of 'carbon capture, usage and storage' (CCUS).⁸

Offsetting

Offsetting is when I pay someone else to reduce their emissions equivalent to the amount of CO₂ that I have emitted, either by for instance planting trees or by actually reducing emissions in some other way. This seems like a good get-out-of-jail-free card as I avoid the problem, at least for a while. But all it does is move the emissions around, and eventually we are going to have to eliminate them all. Offsetting often leads to double counting, questions of 'additionality' (whether the carbon reduction is genuinely new) or dubious practices: wouldn't these trees have been planted anyway, and what if somebody cuts them down in ten years' time? Offsetting really needs to happen at a national level to deal with the emissions from agriculture etc that can't be eliminated and if nothing else the cost of the offsetting opportunities will rise as they are used up: **therefore the arts shouldn't spend money on offsetting, but should invest now to eliminate their own emissions.** The Sustainable Scotland Network, a group of public bodies

⁷ <https://www.ipcc.ch/sr15/chapter/spm/>

⁸ Note that this reliance on 'negative emissions' is controversial: see climate scientist Kevin Anderson's blog post here:

<http://kevinanderson.info/blog/the-hidden-agenda-how-veiled-techno-utopias-shore-up-the-paris-agreement/>

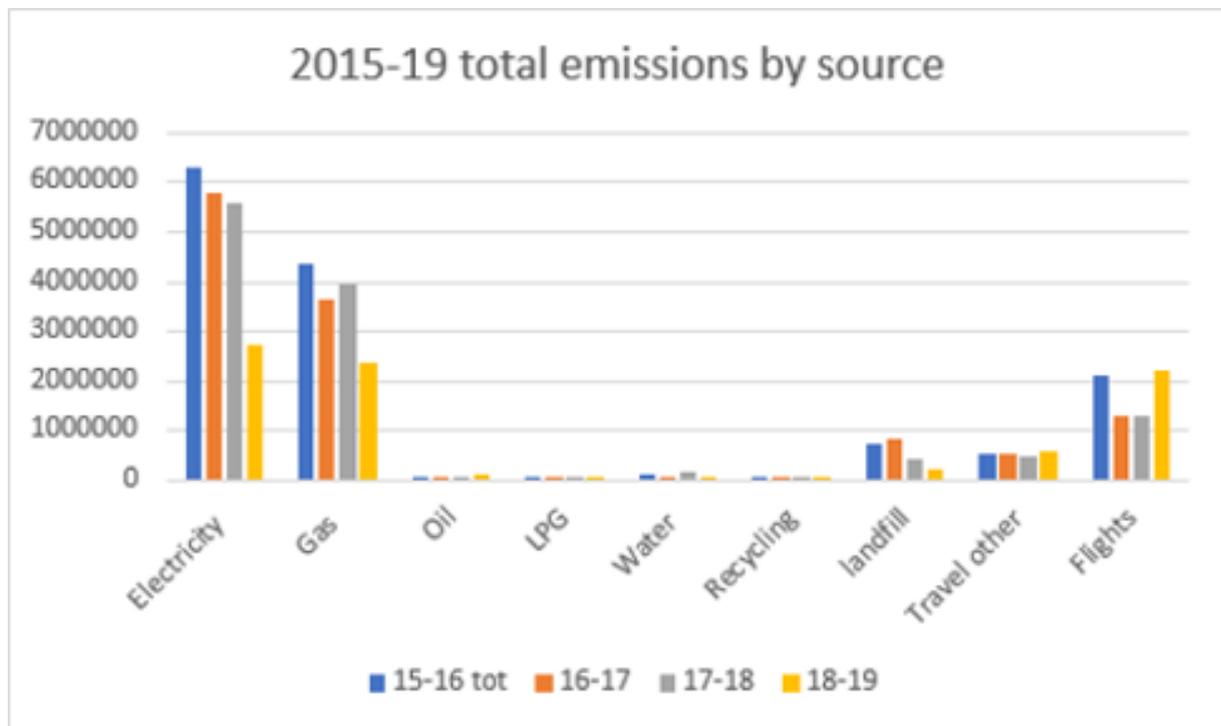
collaborating on climate change, held a useful workshop on offsetting, a report on which can be found here: <https://sustainablesotlandnetwork.org/resources/ssn-offsetting-workshop>

Eliminating the performing arts' carbon emissions

GHG emissions for performing arts organisations are focused in two areas: energy use in buildings and travel/transport of people and materials. The following chart shows emissions from arts organisations in Scotland 2015-19. Notably recycling and waste are minor emissions sources.

Figure 1: Arts organisations in Scotland GHG emissions

Source: Creative Carbon Scotland carbon reporting programme covering 120 organisations, both venue and office based



In the world of carbon reporting, the emissions from energy consumed in a building or in an owned/leased/rented vehicle 'belong' to whoever buys the fuel/electricity, whilst emissions from anything where someone else sells you the service (eg if you rent a heated office, buy an air ticket or purchase something) are technically the seller's responsibility. The cultural sector is therefore going to have to cut out the emissions from the electricity, gas etc used in its buildings by 2050 or earlier, depending on where they are based. With travel it's less clear. Yes, the emissions 'belong' to the airline, but it is disingenuous to pretend that arts organisations aren't responsible in some less technical way for the travel: the industry is built around travel, providing demand for the tickets. If nothing else, business models that rely on large amounts of travel will look increasingly risky as travel providers will have to charge more to cover their own mitigation costs and high-carbon travel will damage companies' reputations amongst audiences, artists and stakeholders.

What this means therefore is that building owners and managers are going to have to invest significant amounts in zero-carbon heating and cooling, whilst also buying 100% renewable electricity, which is currently more expensive than the 'brown' power that is generally supplied. Producers, festivals and others who don't run a significant building are going to need to think hard about the emissions they cause by buying air tickets and other travel, transporting people,

sets etc around the world for tours⁹. And those who build sets and costumes are going to have to think about where their materials come from and how it gets to them: Amazon may be able to deliver something to you tomorrow, but if it's coming from afar instead of close at hand, the emissions will be greater.

Audience travel

What doesn't appear in the graph is the emissions from travel by audiences to arts events and festivals – which may be local but may in the case of international festivals be very long distances. These emissions haven't yet been effectively calculated¹⁰ but there seems little doubt that they could be significant. Again, technically these emissions 'belong' to the audiences, not the venues, but it is the venues and companies that trigger the travel. Touring, when fewer people travel to larger audiences, may therefore be more carbon-efficient than bringing audiences to centralised venues: we need to think about how we plan the work in future.

Overall therefore, the focus should be on investment in buildings to reduce their reliance on high-carbon fuels, and on reducing high carbon travel to a minimum. The [Green Arts Initiative Ireland](#), [Creative Carbon Scotland](#), [Julie's Bicycle](#), [Green Track](#) and local organisations, some focused on the arts but others working towards carbon reduction in all sectors, provide more information on all these topics and more. Ask your local authority or arts funder.

Adaptation

Carbon reduction is technically 'mitigation' of climate change – ie reducing it as much as possible, since it is happening already. Adaptation to the impacts of climate change is mitigation's less fashionable friend, but something we need to be aware of. Storms, severe weather events and flooding can cause havoc for touring and supply chains – can your audience or your artists reach your show? – and long, slow damage to buildings through increased rain, wind and humidity will cost money, whilst higher temperatures may make older venues unusable or add to energy costs for cooling. Festivals were cancelled and programmes and budgets devastated because of The Beast from the East (or Siberian Bear or Snow Cannon etc, depending on your home country), a severe storm in March 2018 that hit the UK, Ireland and western continental Europe. More will follow as the impacts of the climate change that has already occurred continue.

Most work on adaptation has been focused on larger organisations and local governments, but SMEs such as theatre, music, dance and opera production companies need to take note too. At its most basic, the management boards of companies should build climate risks into their risk registers, ensuring that plans exist to deal with severe weather or that box office or tour date losses won't devastate the company. But this is perhaps too simple an approach and another more positive one exists.

Adaptation is a very local issue because of the way the changing climate interacts with the local geography, population, built environment etc. Cultural organisations – and particularly buildings – 'belong' to their local audiences and localities and can enhance their relationship with them by becoming centres of knowledge, information and discussion in preparation for and indeed refuge in the actual case of severe weather or other climate-related problems.

⁹ For example, a one-way air journey from central London to central Rome causes emissions around six times higher than the rail journey: 396.8kg CO₂-e per person on the plane against 46.4kg CO₂-e by train (www.ecopassenger.hafas.de)

¹⁰ In 2008 Julie's Bicycle reported that audience travel to music events accounted for 43% of GHG emissions from the UK music industry (<https://juliesbicycle.com/resource-audience-travel-report-2009/>), but this is one particular sector which may or may not be representative of other sub-sectors.

A role for the arts in addressing climate change

This last idea, that cultural buildings can find a new role in society to help address the climate emergency, points to the wider opportunity for the arts. Of all the performing arts, theatre is particularly well suited to bringing about change in society: it generally uses language, enabling it to explore complex ideas; it often uses a narrative form and sometimes a dialectic one, permitting arguments and thought experiment to be played out. Crucially it results in a 'conversation' between the audience and the stage, one in which the community is discussing together. But all the performing arts bring people together at a time and a place to work together on a shared experience, combining all those brains to create something that they couldn't create separately. The climate emergency is such a big and wicked problem¹¹ that it needs that combined thinking power, as well as the insights of great artists to stimulate the brains. Rather than thinking of the arts communicating about climate change for the powers that be, raising tired questions of instrumental versus intrinsic value, we can work from the premise that art – and especially theatre and the performing arts – help society to think, and to think cleverly about hard things.

The oft-cited communication role of the arts can be valuable, but is perhaps best achieved by harnessing the venue's or company's long-term relationship with a loyal, values-based audience, encouraging and enabling behaviour change in relation to their practices in attending arts events as well as their wider attitudes through the regular communication by email, brochures etc: 'This is the sort of organisation we are, and these are the things we believe in and do – will you help and join us?' Seeking to influence behaviour by communication through works of art is a more complex, much less certain and more controversial area.

However, the best artists are always exploring the biggest ideas of the age and the climate emergency is certainly big and current. We need artists with insight to help us understand and navigate through these treacherous waters and the role of funders, venues and companies and indeed audiences is perhaps to seek those artists out who are wanting to touch upon the climate emergency in their work, and create an enabling environment for that work to flourish, providing opportunities, ensuring that the work can be nurtured and created sustainably and that an audience is found and developed for it.

Conclusion

When the aim was to reduce carbon emissions by 80%, it was easy for the arts (along with just about everyone else...) to believe that what we did was so important that we would be part of the other 20% and so we didn't need to worry. With the need to get to net-zero, that excuse has gone: like the rest of society the arts will have to change quite dramatically to reduce both their direct and their indirect (eg travel) emissions to zero, at the same time as adapting to a zero-carbon, climate-changed world with frequent severe weather events, rising temperatures etc. This is challenging in an industry that is currently very reliant on high-carbon travel and on often old buildings that will be hard to change to low carbon heating and cooling, and to adapt for a warmer climate. It's going to need imagination and creativity and a willingness to change – and despite the arts' constant innovation, ours is also an industry that can be quite conservative.

There are opportunities here:

- More of a focus on local audiences, which are perhaps sometimes valued less than the glamorous international touring

¹¹ https://en.wikipedia.org/wiki/Wicked_problem

- Shorter supply chains (artists, materials) to avoid climate risk can better support more local cultural economies, and of course this aligns with what we have learned from the pandemic
- Less long-distance travel is good for equalities, as people with caring responsibilities (let's face it, usually women), people with disabilities and poorer people are often excluded and their careers damaged by a perceived reluctance to travel
- An enhanced social function of arts organisations, at the heart of the debate around and the responses to the climate emergency

And finally some great art, as the best artists are already keenly addressing the climate emergency.

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