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Module: Contextual studies

Outline a current environmental issue that needs redesign. Explain how you will solve this issue over the duration of your future design career. Underline the tools and approaches you will use and discuss why.



By Rhys Black, 2021

Deforestation humans caught red handed!

This art-piece was made by myself about global warming and deforestation. This shows my passion towards the environment and how I think I can make a change down the line and contribute to the saviour of our planet in due time with the skills required to learn to utilise for our future for both humans and other beings. This piece is sentimental to me as it shows how humans as inhabitants of this planet have overruled other beings ipnt this planet and are slowly destroying the only thing we know, losing our assets and what we love about our planet. In design, we need to be more cautious of where we are sourcing the materials for the consumers in the world around us as it is important to keep an open mind of the implications if we do not abide by this. As consumers of products, we need to be mindful of production of various materials such as different woods like oak and timber. Additionally, as designers we need to actively ensure practises as designers contribute to sustainability and are ethically produced. For example, certain clothing design companies such as Doc Martens, Desserto, Veja and Fleather have incorporated vegan leather in their shoes and other products to maintain ethical attributes within their brand. These materials are sourced from other materials such as cactus leather or leaf leather. Furthermore, furniture based designs have also been using these similar techniques within their market by incorporating vegan leather on leather sofas and chairs.

Although there has been a solid sense of reform in our design society, there is still a long way to go to reach a fully sustainable and ethical civilisation. But would our world even be saved by the time this happens? Articles from Cinnamon Carlarne (2008), and Harro Van Asselt, Francisco Sindico, and Michael Melhing (2008), point out that tackling climate change is at once a problem with environment, trade, human rights, and many other spheres. It is about economics, politics, and culture. As these

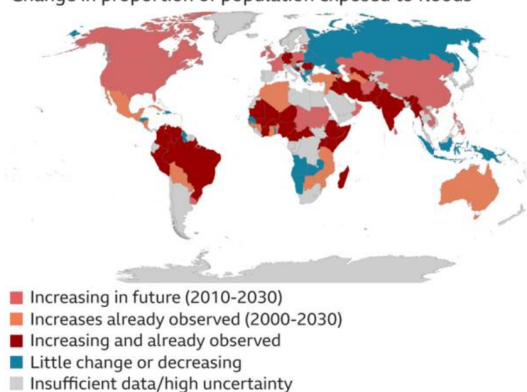
articles demonstrate, climate change relates to biodiversity, trade, the law of the sea, and human rights. Grappling with one component of the problem, such as the need for an emissions trading regime, in isolation may not lead to a significant reduction in warming (as Feaver and Durant assert), but it may also create new problems in terms of the impact on biodiversity, trade relations, and social justice. Both Carlarne and Van Asselt, Sindico, and Melhing deal with the issue of fragmentation of international law and the need to develop some coherence both in terms of substantive issues and in terms of process. Van Asselt et al. focus on the challenge of dealing with a fragmented system of international law when trying to reduce our impact on climate. These major points suggest that the desired target of achieving full sustainability may not be possible. Continuing this point, this also begs the question whether we have gone too far in industrialisation as the human race for climate change to be irreversible.

Satellite images were used to document the rise, which is far greater than had been predicted by computer models. The analysis shows that migration and a growing number of flood events are behind the rapid increase.

By 2030, millions more will experience increased flooding due to climate and demographic change, according to the authors of the study, released before today's IPCC report. Flooding is the environmental disaster that impacts more people than any other, say researchers. That view has echoed around the world in recent weeks, with huge inundations destroying lives and property. In this new study, researchers looked at daily satellite imagery to estimate both the extent of flooding and the number of people exposed to over 900 large flood events between 2000 and 2018. They found that between 255 and 290 million people were directly affected - and between 2000 and 2015, the number of people living in these flooded locations increased by 58-86 million. This represents an increase of 20-24% in the proportion of the world population exposed to floods, some 10 times higher than previous estimates. BBC News. (n.d.). *Climate change: Stark warning of "irreversible changes."*

Flood risk will continue for Southern Asia and sub-Saharan Africa

Change in proportion of population exposed to floods

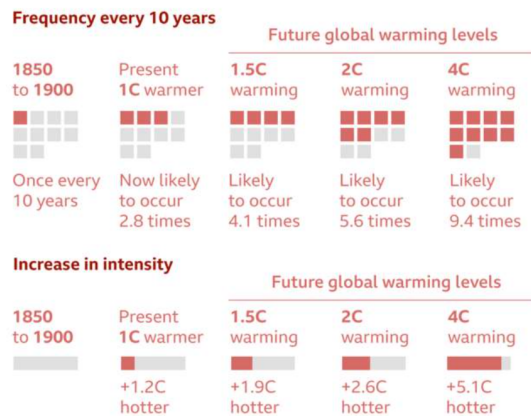


The report warns that both extreme heat and extreme rainfall will become a lot more frequent and intense as global temperatures continue to rise.

Both are already worse than pre-industrial levels, as the graphics below show.

Extreme heat becomes more frequent

Projected increase in frequency and intensity of high temperatures which only occurred once in every 10 years on average in a climate without human influence



Industrialisation in the UK and most places in Europe began with the instalments of oil factories in the 1700's. Continuing this cycle of production may result in us not being able to roam around the beauty of nature for much longer with the suggested graphical information. So how do we as designers contribute to this crisis? There was a time where forests and trees dominated landscapes and were intertwined with civilization. However designers and producers of roar materials such as wood like Oak, Pine, and Timber have grown and developed as time passed. Currently, Timber is a multi billion pound industry which has influences on many lives, both human and animals lives around the world. As designers it is our moral duty to actively support sustainable resources and adopt environmentally sound practises. Understanding the impact that logging and timber production have on natural assets is imperative but complete transparency about the origins of Timber can be challenging. stanbrook (2014). *How sustainable is timber?*

A common curiosity with myself and many others is how bad is climate change now in comparison to the past. Is it all our fault or has the nature of our planet also made an unwanted contribution. With my found research I came across an article that suggests that humans are in fact not all responsible for this. researchers took this approach to reconstruct variations in carbon dioxide levels across the MECO warming event, using fossilised algae preserved in sediment cores extracted from the seafloor near Tasmania, Australia, by the Ocean Drilling Program. They refined their estimates of carbon dioxide levels using information on the past marine ecosystem derived from studying changes in the abundance of different groups of fossil plankton. Their analyses indicate that MECO carbon dioxide levels must have

at least doubled over a period of around 400,000 years. In conjunction with these findings, analyses using two independent molecular proxies for sea surface temperature show that the climate warmed by between 4 and 6 degrees Celsius over the same period.

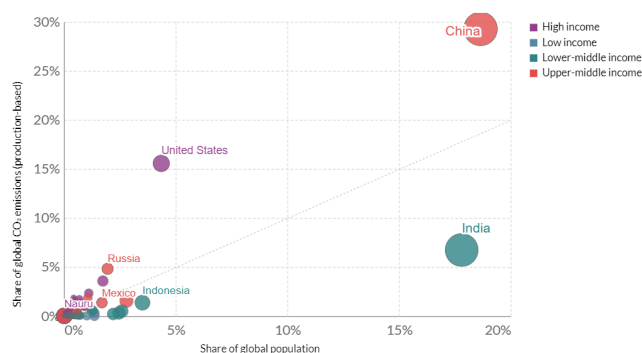
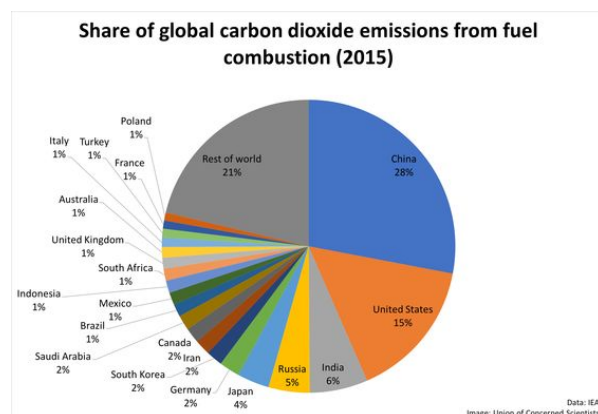
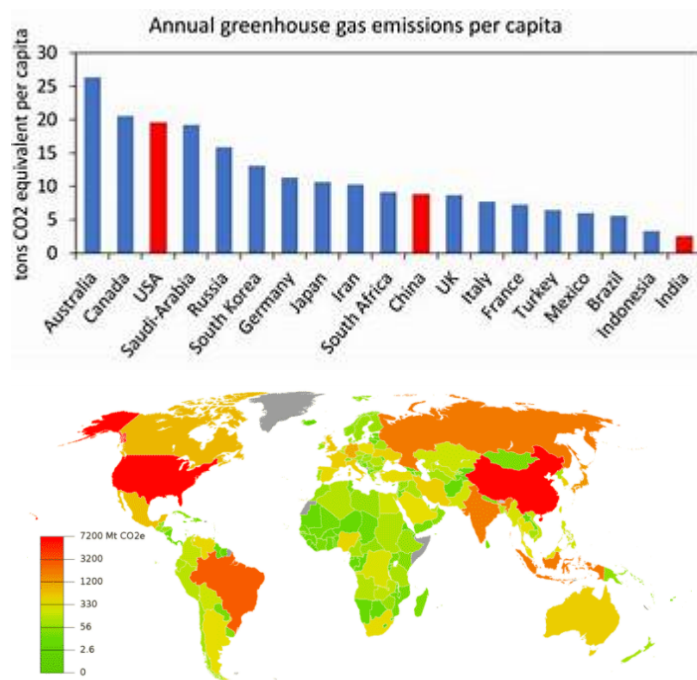
"We found a close correspondence between carbon dioxide levels and sea surface temperature over the whole period, suggesting that increased amounts of carbon dioxide in the atmosphere played a major role in global warming during the MECO," said Bohaty. The researchers consider it likely that elevated atmospheric carbon dioxide levels during the MECO resulted in increased global temperatures, rather than vice versa, arguing that the increase in carbon dioxide played the lead role.

"The change in carbon dioxide 40 million years ago was too large to have been the result of temperature change and associated feedbacks," said co-lead author Peter Bijl of Utrecht University. "Such a large change in carbon dioxide certainly provides a plausible explanation for the changes in Earth's temperature." ScienceDaily. (n.d.). *Extreme global warming in the ancient past.*

Although this may be comforting for some, this is no reason to become complacent with our actions. This is still bad news regardless and we still need to continue to maintain a colossal responsibility as a race to decrease our carbon footprint. My requirement as a designer and as a writer is to discuss what the design society can do to prevent this crisis from having a further impact on us. The design society being all disciplines, furniture, fashion, crafts and many more. Since the Industrial Revolution, global resource consumption has been on the rise. It is not possible to predict an end to this growth. More than seven billion people today wish for a good and safe life – for themselves, their children and their children's children. This involves consuming products and services. Sustainable Goals. (2018). *Design for sustainability*. Moreover, despicably only a fraction of the used resources by us actually circulate within the global economy, for reuse or recycling. As anticipated, this comes with many consequences. We have to design for a dematerialised circular society. You may wonder what this means, well, Goods and services are only sustainable if they are as dematerialised as possible and allow for continued use or re-use, or recycling with minimal material loss. They should be easy to disassemble and reuse, through a modular design, for example. They should have a long lifespan and be composed of few, mostly secondary, materials; only have a small amount of material loss during their lifecycle; and be suitable for renting, sharing and swapping. So this means we need to design products which make this available and accessible for our consumers to ensure that less raw materials are wasted. As mentioned earlier, using sustainable materials like plant based leather would be designing for single use and circulates through society. To compliment this discussion, who are the people trying to make a difference about this? There are thousands of companies, charities, and campaigns which are helping us take the step in the correct direction for global warming and climate change. Some of these include the United States Climate Justice Alliance (CJA), international Climate group, and international

350.org. These groups are working collaboratively and inclusively to find solutions. By engaging eaters, community activists, policymakers, artists, families, and more, they are helping people step up and, hopefully, save the planet. Food Tank is excited to highlight a snapshot of exciting organisations working to solve the climate crisis. Reser, A. (2020). 36 organisations working to reverse climate change.

What countries contribute the most to climate change with the highest CO2 emissions?



As you can see here, the countries contributing the most to climate change are some of the largest countries on this planet. These countries USA, China, Brazil, and India emit the most amounts of carbon dioxide. The reason for this may be that these countries have a large surface area, possessing rich land which can host produce which ultimately contributes to climate change. For example, Despite Brazil's worst recession in history, national greenhouse gases emissions are estimated to have risen 8.9% in 2016 and reached the highest level since 2008, agriculture and illegal deforestation were the main culprits. Emissions from land-use change grew 23% in 2016, accounting for roughly half of all greenhouse gases released into the atmosphere by Brazil. This was driven by a 29% increase in Amazon deforestation during the period between August 2015 and July 2016, according to calculations by the National Institute for Space Research (INPE), a federal government research centre. Climate Home News. (2017). *Brazil's carbon emissions rose 8.9% in 2016, despite recession.*

In contrast to this, the countries that are helping the most to fight global warming are, Denmark, Belgium, Portugal, Malta, Luxembourg, and Morocco.

- Denmark After leading the rankings for five consecutive years, Denmark slipped significantly in the latest index, in part, the researchers say, due to a reversal of a number of environmentally friendly policies. The country is still among the better performing nations when it comes to saving the planet, but policy changes like a decision to invest in highways rather than electrified railroads (as the government had previously promised) means it took a hit this year. As pressure from environmentally-minded citizens heats up, expect one or two more vandalised statues. This just shows the passion the people of Denmark have for the planet. Elements of this passion should be reciprocated in all nations to battle global warming.
- Belgium as a whole is committed to the EU's target to cut 1990 carbon emission levels by 20 percent by 2020—and has started by shutting down the last of its coal-powered power plants.
- Just seven years ago, Portugal was hit by an economic recession that led to record unemployment. As part of its recovery, the country put into place progressive policies that encouraged local arts and rejuvenated its decaying architecture. Along with a focus on the country's creatives, the Portuguese government has also focused on creating green jobs and revamping its energy system—and it's paid off. A government-led "Commitment to Green Growth" sees the country promoting the "low-carbon economy" and investing in sustainability efforts across industries and territories; policies which helped Portugal jump up seven spots year-over-year in the index.
- When it comes to resources, it's tough being a tiny island in the middle of the Mediterranean—but it also makes Malta all the more susceptible to the rising

tides of global warming. While until recently, the country has relied on imported oil for its energy, a shift towards solar power and gas-fired plants sees the 122-square-mile island among the leaders in the fight against climate change. It is both inspiring and frustrating to see a tiny island do so much for their people and the environment. Where is the UK on this list? Where is the British effort that I am sure we have made over time.

- When it comes to the EU, Luxembourg is one of the best-performing in dropping its share of carbon emissions. Between 2015 and 2016, it reported a four percent drop in CO₂ emissions from fossil fuels. It may not seem like a lot, but when you compare it to the EU total drop of just 0.4 percent, it shows that its commitment to a 20 percent greenhouse gas reduction over the course of just five years—the most ambitious goal of any UN member state—is more than just words.
- The only non-European country to make it into the top bracket, Morocco takes the number one spot in the report when it comes to national policy—that is, the experts and researchers consulted for the index value the official commitments this developing country has made to cleaning up its energy industry. Despite the country still relying primarily on fossil fuels, the report cites Morocco's favourable conditions for wind, solar, and hydro power (all that empty desert, all that sun, all that ocean) and the government's commitment to tapping into those resources as part of the reason it ranks so highly.

To conclude with this given information that has been discussed in this writing, there are many ways that I can personally and as a design society can adjust the way we think creatively and make products. For example there would be a massive change in what we do when we source raw materials such as wood. In the future, if I make oak products, I would plan to replant at least 75 percent of the material sourced to have less impact on the environment. Additionally, using less unsustainable products like plastic would be highly positive for design and its impact on the environment. For example, using less products such as nylon fabrics to make mesh cushioning on furniture, which is my specialty, can be scrapped. Nylon materials are very harsh for the environment as it uses and requires so much energy to manufacture the material, ultimately contributing to global warming. In the future I am hoping to bring forward both my passion for the planet, my art, and my skillset to help fight climate change.

References

BBC News. (n.d.). *Climate change: Stark warning of “irreversible changes.”*

Cinnamon Carlarne (2008)

Climate Home News. (2017)

Harro Van Asselt, Francisco Sindico, and Michael Melhing (2008)

stanbrook (2014). *How sustainable is timber?*

ScienceDaily. (n.d.). *Extreme global warming in the ancient past.*

Sustainable Goals. (2018)

Reser, A. (2020)