



FIGURE 1 (LEFT)
'Earthrise' (NASA, 1968)

Isobel Hedley-Jones

How far does Christian religious teaching align with current environmentalist narratives, and how can this be used to help the public comprehend and tackle climate change?

We have come to a stalling point in the environmental movement. The science is indisputable (IPCC, 2013), awareness is highly saturated (Gallup, 2009) and a comprehensive international climate treaty has been achieved (Paris Agreement, 2015). Despite this, global emissions continue to rise (Chestney, 2018) and belief in the science of climate change has become deeply divisive (Kennedy, 2016). Science is failing to communicate with the public in a way that motivates them into action. In the past religion and science have been seen as two opposing forces (Suran, 2010), however, this is now a minority view, with support for climate science coming from the top of most major religions and denominations (Catholic (W2.vatican.va, 2016) Church of England (Churchofengland.org, 2018) Methodist (Iovino, 2017) Muslim (Unfccc.int, 2015) Hindu (Unfccc.int, 2015)). But perhaps this is not enough.

This essay will explore the relationship between climate change and religion. It is important to examine how the narratives of environmentalism and Christianity interact on a philosophical level, before exploring how far climate change action in the public sphere is a moral duty of Christians. Finally the role churches can play in public response will be examined. I have chosen to focus on Christianity primarily to narrow the already large scope of this essay, but also because Christian dominated societies tend to have the highest emissions (Ge, Friedrich and Damassa, 2014). I will argue that churches, the institutions that speak to our inner most humanity, must help us bridge the gap between scientific fact and practical action.

Perhaps the most poignant intersection of religion and science was during a live TV special with the crew of Apollo 8. On their mission they took what has been called “most influential environmental photograph” (Rowell, n.d.) ever taken, ‘Earthrise’ (Figure 1). To finish this broadcast showing, at that point, arguably humanity’s greatest scientific achievement, the astronauts chose to read passages from Genesis (NASA Content Administrator, 2017). While being a huge scientific achievement it was the emotions that this photograph evoked that truly resonated with the public. ‘Earthrise’ showed humanity the fragile beauty of our lonely planet for the first time, complete with complex weather systems and ecosystems. The wonder evoked by the photograph permeated into the scientific and social work of the environmental movement during the following decades in academic works such as the Gaia theory and the first ‘Earth Day’ in 1970 (Lazier, 2011). It stressed the interconnectedness and importance of every process on our planet, from massive El Nino weather systems to tiny bees. The ‘Trophic Cascade’ theory encapsulates this, with the most famous example being the reintroduction of wolves into Yellowstone National Park. By hunting the deer in the valleys, the wolves enabled the regeneration of the flora on the banks of the rivers, changing the flow of the rivers themselves, among other influences (Sustainable Human, 2014). The Earth is a biological and ecological masterpiece, that, as far as we know, is the only planet in the universe capable of supporting life, therefore its value is intrinsic for environmentalists. For many Christians the Earthrise photograph was significant because it was the first time most had seen a photograph of Earth as God would see it. The fact that God created it, in whatever degree of metaphor they believe, makes the Earth innately sacred. This is an idea repeated by many Christian denominations, perhaps most simply by the Quakers “The Earth is God’s work and not ours to do with as we please” (Seymour, 2009). Although the two narratives do not follow the same reasoning, they come to the same conclusion; the Earth is special.

There is a consensus in the scientific community that climate change is human caused (IPCC, 2013). Many environmental scientists would go one further and argue that humanity has permanently altered the climate record of our planet (IPCC, 2001). This is a scary thought. For Christians this can also be a contradictory one. In Genesis God commands that humans “fill the earth and subdue it”, but science is now showing that in the act of ‘subduing’ the earth we have been harming it. Some

environmentalists, notably Lynn White, have argued that this 'Dominion Narrative' means Christian teaching is dangerous, and should be abandoned in favour of more eco-centric narratives (White Jr., 1967). The 'Dominion Narrative' has allowed our deeply harmful culture to flourish and justify itself, however, this does not mean that Christianity must be abandoned entirely in order to make the drastic changes needed. The large numbers of Christian environmentalists, from St Francis of Assisi to Sister Dorothy Stang ((Earth Day Network, 2018) (Rocha, 2018), prove that alternative readings of this passage can form equally powerful narratives. In 2016 Pope Francis described humanity as "Stewards, but not masters". In this narrative, we are merely looking after the Earth for God and must preserve it, ready for his return. This aligns well with the environmentalist idea that humanity must reconsider its relationship with the Earth and alter its destructive, extractionist culture.

In spite of most major denominations' teachings, a small minority of Christians, however, argue that the increasingly erratic environment is caused by God and is leading up to the Judgement Day. This means that to try to prevent or adapt to our new reality of increasingly frequent extreme events is to go against the will of God (Gibson, 2017). The opinion that we should do nothing is not unique to Christianity. Some atheists would also argue that climate change is not human caused, so we do not have to change our society; we can continue to consume and emit at the same levels and eventually technology will invent a solution to the changing climate (Heartland Institute, 2018). This opinion is contrary to all credible scientific research(Oreskes, 2004). Humans caused climate change. Humanity cannot defer responsibility to God or to the idea of future technology.

This leads into a central debate in climate change response: Promethean versus Soterian. Those who support a Promethean response hope that through future technologies and geo-engineering, for instance, using aerosol particles to reflect excess heat from the sun back in to space, we can lessen the impacts of climate change (Galaz, 2012). They argue that humanity has engineered every other environment we have ever inhabited, why not expand to a planetary level (Anshelm and Hansson, 2014). Like the ancient Greek hero, we can 'steal' god-like technology to progress our civilisation. A Soterian response, named after the Greek goddess of safety and caution, is often framed as merely opposition to a Promethean response, the belief that to continue meddling in processes we do not understand is dangerous. But there is more to this theory than just caution. It suggests that humanity should re-evaluate our relationship with the planet and respect it as a perfect whole. Proponents suggest that climate change is unavoidable and so to survive we must view the Earth as an equal to work with rather than against (Anshelm and Hansson, 2015). Christianity, depending on interpretation, allows for a believer to fall on either side. For instance the passage "Be fruitful and increase in number; fill the earth and subdue it." (Genesis 1:28) could be interpreted by a Promethean that God gave us power to alter the Earth and make it liveable for the next generation. A Soterian might look to a different translation, the 'New Living Translation' for instance translates "subdue" as "govern", a word that suggests a far more co-dependent and just relationship.

Climate change will have, and is having, wide ranging impacts (Jackson, 2018). These vary in geographical location, physical scale and temporal scale. Importantly, these impacts will exponentially impact already vulnerable people and communities (Choularton, 2014). These range from girls in sub-Saharan Africa missing hours of school to walk further and further for brushwood fuel, to residents of a deprived seaside town on the East coast of England, the fastest eroding coastline in Europe (Quinn, Philip and Murphy, 2009), having to watch as their livelihoods collapse into the rising sea. Jesus's interest and care for the poor was part of what made him different and radical during his ministry. To follow his teachings is to take a deep interest in the welfare of the poor and vulnerable. Ignoring this issue is to ignore the suffering of thousands of people, therefore, taking an interest and trying to respond to climate change is a Christian's moral duty.

It can, therefore be established that, in many ways, the narratives of both Christianity and the environmental movement intertwine and come to similar conclusions, despite different reasoning. Moreover, Christianity is broad enough to allow the different opinions within environmentalism to be justified. Responding to climate change can also be described as a moral duty of Christians because of the suffering it will cause. The following section will therefore explore how Christian Churches might publicly respond to climate change and why their response might be more effective than previous ones. In the environmental movement, the idea that we can still alter our lifestyles to prevent warming above 1.5 degrees centigrade (°C) is still the mainstream, as reflected in the Paris Agreement (Paris Agreement, 2015). In the following section I will explore how churches can help societies, communities and people alter their lifestyles to prevent more warming. Many scientists suggest that even if we do manage to achieve goals, such as those set out in the Paris Agreement, we many still see significant impacts of a changing climate (Greshko, 2017). Therefore, I will also explore how churches may help adaptation measures gain traction.

As previously discussed, climate change awareness is saturated in most societies (Gallup, 2009) and a comprehensive climate change agreement has been achieved (Paris Agreement, 2015), so why are emissions continuing to rise (The Emissions Gap Report, 2017)? Yuval Harari argues in his 2016 book *Homo Deus*, that “there is no scientific method for determining how humans ought to behave” in any given circumstance. He gives the example that science tells us that humans need oxygen to survive, but it does not tell us if it is morally correct to execute death row inmates by asphyxiation. The same can be said for climate change. The scientific community tells us that we need to keep warming below 1.5 °C. It does not help to solve the complex and numerous questions this answer brings up. Should we stop burning fossil fuels tomorrow or should we slowly phase to renewable energy sources? How should we navigate the massive societal changes that will come with more frequent extreme weather events? Do nations that will be most extremely affected by climate change deserve compensation from nations that produced the most emissions? While Christianity may not currently hold the answer to these questions, guidance from Christian teaching may help the next generation of political, social and business leaders navigate these issues.

The churches may have a unique role in leading response to climate change because they can act on many levels. They connect with millions of people on a deeply personal level, help structure communities across the world and unite them into a central, often international, organization. This ability to operate on many different scales effectively has been truly valuable in other social movements, most notably the Civil Rights movement in the USA (Calhoun-Brown, 2000). The contribution of the southern churches to the civil rights movement was multifaceted. The sense of community and feeling of safety provided by the church building helped provide emotional support to African Americans living under the Jim Crow laws. The churches also acted as information disseminators, allowing communities to contribute to national level events, such as The March on Washington in 1963 and the regular sit-ins and freedom rides. Organizations like the Southern Christian Leadership Council, while separate from the actual churches, worked through the communities built by churches to encourage social action and became a representative to those in power of the discriminated communities. The influence of the churches can even be heard in the speaking style of Barack Obama, its greatest success, and in its greatest herald, Martin Luther King Jr. King was famously a Baptist minister, who used his understanding of Christian narratives to persuade and inspire his followers (Collins, 2017). His most famous line “I have a dream”, alludes to the passage Isaiah 40:4-5, and the entire “I have a dream” speech uses biblical language to create a feeling of higher cause throughout to connect with the audience on a personal level. The methods and successes of the civil rights movement can be used as inspiration for the Christian community as they tackle climate change.

Climate change is a difficult concept to communicate to the public (Clemence, 2016). It is physically invisible, often only detectable over decades of observations in remote locations and there is no immediate change after an action. While Christianity will not be able to fully solve these issues, it is practiced in helping people believe in physically invisible, spatially distant and temporally remote ideas, with no immediate reward. Without faith in the abstract, Christianity could not function. For centuries Christianity has used a variety of methods to aid people's understanding, some more relevant to the modern world than others. Storytelling is one such method that has survived. Growing up, the stories I read in my children's Bible were just as interesting to me as any modern picture book. As an adult, like millions of people around the world, these stories now carry moral insights as well connecting emotionally with me. Some of these stories have remained relevant because they are universal; like Jonah we have all tried to run away from our responsibilities (Jonah 1-4). Other stories have had their meaning adapted to a modern context; the flight into Egypt (Mathew 2:13-16), has become often referenced in relation to our response to the refugee crisis (Martin, 2017). By using Bible stories, that most Christians have read since childhood, to explain complex and unnerving concepts, climate change may start to feel less overwhelming.

Once people personally understand and can come to terms with climate change they can start to respond to it. Individual actions, like walking to the shops or turning lights off, receive no immediate reward and can feel insignificant and pointless (National Research Council, 2010). Church communities can help tackle these issues by working together. Schemes to reward positive actions and compete with other parishioners could help motivate the whole church community, using apps such as Oroeco (Oroeco.com, 2018). As in the Civil Rights movement, churches can act as information disseminators (Calhoun-Brown, 2000). Parishes bring together a diverse group of people, not just those who attend services, but also those who attend groups at the church like the Scouts, Guides, toddler sessions and charity meetings. The sharing of knowledge between these groups could be a vital way of sharing eco-friendly tips, vegetarian recipes and first aid, but also could build relationships within the community to help people deal with the societal stresses that climate change will bring in the coming years. For example, in South Chicago, young volunteers led by a lead gardener visit elderly people to do their gardening. It was anecdotally reported that the project had helped educate about healthy lifestyles, brought the community together and increased the young people's pride and leadership skills (Westphal and Hirsch, 2010). Community based action may be able to help people make meaningful changes to their lives.

Church communities may also be able to benefit from support from the national and international church, in terms of funding for large scale projects. With the Catholic church and the Church of England both worth over £7 billion (Millar, Schneiders and Vedelago, 2018) (Goodley, 2017), they could pool money raised by communities to fund large scale projects, such as solar panels, a micro-hydroelectric system or de-pollution of a river. This would allow communities to take responsibility for changing their habits and relationships with the environment. Provision of central aid after extreme weather events may also become increasingly important, as those countries that are worst affected are often the least able to respond to events (Choularton, 2014).

According to Forbes, the Pope has been on the 'Top 10 most powerful people' list for the past 8 years, with Pope Francis rising to a high of number 4 between 2013-2015 (Forbes.com, 2018). This power gives him a responsibility to use his power for good. The Catholic Church, for instance, is far more likely to be able to command the attention of the likes of Vladimir Putin, Angela Merkel and Xi Jinping than tiny island nations like Tuvalu, Nauru and Palau, who may be the first victims of rising sea levels (Pariona, 2018). On an international level, church leaders must enter into dialogue with each other and with other leaders on behalf of their followers. To be able to present a united front

on issues such as fossil fuels and intensive cattle farming, they could be an extremely powerful force to influence companies and governments. A boycott has never been seen on the scale of the 2.1 billion Christians worldwide, but significant successes on a smaller scale have been instrumental in previous campaigns. The Montgomery Bus boycott achieved its aims and gave significant credibility to the civil rights campaign in the USA (McGhee, 2015), while the sporting boycott of apartheid South Africa dealt a significant cultural blow to the white South African elite and eventually helped bring an end to the system (MacLean, 2009).

While some maintain that we can still prevent the worst of climate change, others within the academic community are warning that we have already permanently altered our planet's climate. The most extreme research suggests that living standards will drop dramatically by 2030, vast swathes of the planet will become inhospitable and most major cities will be continually battered by extreme weather events (Turner, 2014). This is enough to make anyone feel hopeless. This combined feeling of hopelessness and disbelief can be highly preventative to taking meaningful action to prepare. Religion has been shown to act as a barrier to developing depression therefore without even engaging with climate change specifically, churches may be able to provide significant mental support to individuals. The community that the church provides can also help foster mental resilience in the face of adversity (Kasen et al., 2011). Foudi, Osés-Eraso and Galarraga (2017) suggest that, as climate change is so uncertain, rather than focusing on trying to make our physical world resilient, which is expensive and may turn out to be ineffective, there should be an increasing interest in making populations mentally resilient. This may become an increasingly important duty for churches.

As well as mental resilience, churches can help communities prepare for, withstand and rebuild following extreme weather events. The nature of climate change means that these events are, currently, largely unpredictable, but the UK can expect to see more heatwaves (Carrington, 2018), like that experienced at the start of the summer 2018, more flooding (GOV.UK, 2018), and eventually a holistic change to our mild climate to bring it more in line with others of our altitude (Thornalley et al., 2018).

In extremes of temperature the elderly can be especially vulnerable. They often have reduced thermoregulatory ability, are more likely to have reduced mobility, may live alone and take medications (Cheng et al., 2018). While, churches cannot be expected to alter the other issues, getting other members of the church community to check on vulnerable members to make sure they are coping can have multiple benefits. As a child, at harvest festival my school would collect produce and the school children and their parents would take the parcels round to elderly members of the community. If this scheme was continued on a regular basis, visitors could make sure they are coping with the weather, therefore preventing premature deaths, but also helping to reduce loneliness.

Community bonds created in times of normality can become especially important in during extreme weather events. Having relationships within the community means vulnerable people are more likely to be helped and warned by their neighbours. Community can also play a large part in recovery after extreme weather events. Although not a climate induced event, the response of the community around Grenfell Tower is a good example of community recovery (Smith, 2017) (Bowcott, 2017). In the immediate aftermath of the event numerous churches, temples, mosques and secular community centres opened their doors. Some acted as donation sorting points, others as temporary accommodation and some simply remained somewhere for people to quietly reflect. In the months since the fire, community groups campaigned on behalf of victims, continued to co-ordinate donations and run groups to deal with the mental anguish caused. As events with a comparable loss

of life increase, the pre-established community bonds formed by churches will be relied on more and more by communities.

Like no other issue before it, climate change eliminates national boundaries. Burning coal in India is just as harmful as burning coal in the Australia and next year's hurricane season will not pay attention to which country is signed up to the Paris Agreement. If humanity is to solve climate change the international community must work together more effectively than it ever has before. In this context nationality becomes increasingly irrelevant. It is, in many ways arbitrary and abstract (Anderson, 1983). Therefore, surely religion is a far better way to identify oneself on the international stage as it aligns you with a set of ideals and guidelines for life. It will be our moral responses to climate change that make the difference. But we should all remember that we are citizens of Earth first and foremost.

In this essay I have explored how Christianity and environmentalism are compatible and complimentary. I have argued that responding to climate change is inescapable as a moral responsibility for Christians, but Christianity is broad enough to encompass many views about environmentalism. Science has proved that climate change is happening, but without the personal connection, community and narratives that Christianity uses, it will struggle to motivate the public into action. Therefore, churches are morally dutybound to respond to climate change. As well as helping the public comprehend climate science, churches have the ability to act as leaders in the movement. Combining the benefits of being established international, national and community level organisations, means churches' contributions to the mitigation and adaption for climate change could be vital, if executed well.

Climate change is the most significant issue facing humanity. Every day that we waste talking about whether it is real, we inch towards a future that will not be liveable for the vast majority of people. The 'Dominion Narrative' of Christianity has contributed to our culture of exploitation of vulnerable people and the environment. Christianity now has a chance to take responsibility for this and act decisively. It feels appropriate to end with the words of the namesake of today's most influential religious leader, Pope Francis;

Be praised my Lord for Mother Earth:
abundant source, all life sustaining;
she feeds us bread and fruit and gives us flowers.
Be praised my Lord for the gift of life;
for changing dusk and dawn; for touch
and scent and song.

- St Francis of Assisi

Bibliography

Anderson, B. (1983). *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. London: Verso.

Anshelm, J. and Hansson, A. (2014). Battling Promethean dreams and Trojan horses: Revealing the critical discourses of geoengineering. *Energy Research & Social Science*, 2, pp.135-144.

Anshelm, J. and Hansson, A. (2015). Has the grand idea of geoengineering as Plan B run out of steam?. *The Anthropocene Review*, 3(1), pp.64-74.

Bowcott, O. (2017). Grenfell Tower fire: army of volunteers join relief effort. *The Guardian*. [online] Available at: <https://www.theguardian.com/uk-news/2017/jun/17/grenfell-tower-fire-food-donations-kensington-chelsea-relief> [Accessed 14 Sep. 2018].

Calhoun-Brown, A. (2000). Upon This Rock: The Black Church, Nonviolence, and the Civil Rights Movement. *PS: Political Science & Politics*, 33(02), pp.169-174.

Carrington, D. (2018). Heatwave made more than twice as likely by climate change, scientists find. *The Guardian*. [online] Available at: <https://www.theguardian.com/environment/2018/jul/27/heatwave-made-more-than-twice-as-likely-by-climate-change-scientists-find> [Accessed 14 Sep. 2018].

Cheng, J., Xu, Z., Bambrick, H., Su, H., Tong, S. and Hu, W. (2018). Heatwave and elderly mortality: An evaluation of death burden and health costs considering short-term mortality displacement. *Environment International*, 115, pp.334-342.

Chestney, N. (2018). Global carbon emissions hit record high in 2017. *Reuters*. [online] Available at: <https://www.reuters.com/article/us-energy-carbon-iaea/global-carbon-emissions-hit-record-high-in-2017-idUSKBN1GYORB> [Accessed 4 Jul. 2018].

Choularton, R. (2014). UN World Food Programme. [online] *Wfp.org*. Available at: <https://www.wfp.org/stories/climate-change-already-impacting-vulnerable-communities-says-report> [Accessed 14 Sep. 2018].

Clemence, M. (2016). Principles of uncertainty – the public and environmental scientists – Ipsos Global Trends. [online] *Ipsosglobaltrends.com*. Available at: <https://www.ipsosglobaltrends.com/principles-of-uncertainty-the-public-and-environmental-scientists/> [Accessed 14 Sep. 2018].

Collins, P. (2017). *When they go low, we go high: Speeches that shape the world – and why we need them*. 2nd ed. London: Fourth Estate.

Earth Day Network. (2018). The Patron Saint of Animals and Ecology | Earth Day Network. [online] Available at: <https://www.earthday.org/2016/10/06/patron-saint-animals-ecology/> [Accessed 10 Sep. 2018].

Forbes.com. (2018). [online] Available at: <https://www.forbes.com/powerful-people/list/#tab:overall> [Accessed 14 Sep. 2018].

Foudi, S., Osés-Eraso, N. and Galarraga, I. (2017). The effect of flooding on mental health: Lessons learned for building resilience. *Water Resources Research*, 53(7), pp.5831-5844.

- Galaz, V. (2012). Geo-engineering, Governance, and Social-Ecological Systems: Critical Issues and Joint Research Needs. *Ecology and Society*, 17(1).
- Gallup, I. (2009). Awareness, Opinions About Global Warming Vary Worldwide. [online] Gallup.com. Available at: <https://news.gallup.com/poll/117772/Awareness-Opinions-Global-Warming-Vary-Worldwide.aspx> [Accessed 4 Jul. 2018].
- Gibson, D. (2017). Politics, culture or theology? Why evangelicals back Trump on global warming - Religion News Service. [online] Religion News Service. Available at: <https://religionnews.com/2017/06/09/politics-culture-or-theology-why-evangelicals-back-trump-on-global-warming/> [Accessed 11 Sep. 2018].
- Goodley, S. (2017). Church of England made stunning 17% return on investments in 2016. *The Guardian*. [online] Available at: <https://www.theguardian.com/world/2017/may/21/church-commissioners-for-england-ethical-investing> [Accessed 14 Sep. 2018].
- GOV.UK. (2018). Climate change means more frequent flooding, warns Environment Agency. [online] Available at: <https://www.gov.uk/government/news/climate-change-means-more-frequent-flooding-warns-environment-agency> [Accessed 14 Sep. 2018].
- Greshko, M. (2017). Current Climate Pledges Aren't Enough to Stop Severe Warming. [online] *News.nationalgeographic.com*. Available at: <https://news.nationalgeographic.com/2017/10/paris-agreement-climate-change-usa-nicaragua-policy-environment/> [Accessed 14 Sep. 2018].
- Harari, Y. (2017). *Homo Deus*. 1st ed. London: Vintage Publishing.
- Heartland Institute (2018). *The Global Warming Crisis Is Over*. [ebook] Heartland Institute. Available at: https://www.heartland.org/_template-assets/documents/publications/one_page_summary_of_ccr-ii.pdf [Accessed 11 Sep. 2018].
- Iovino, J. (2017). Ways we can combat climate change – The United Methodist Church. [online] The United Methodist Church. Available at: <http://www.umc.org/what-we-believe/ways-we-can-combat-climate-change> [Accessed 10 Sep. 2018].
- IPCC (2001). IPCC - Intergovernmental Panel on Climate Change. [online] Available at: <http://www.ipcc.ch/ipccreports/tar/wg1/index.php?idp=516> [Accessed 10 Sep. 2018].
- IPCC, 2013: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G. K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1535 pp, doi:10.1017/CBO9781107415324.
- Jackson, R. (2018). *Global Climate Change: Effects*. [online] *Climate Change: Vital Signs of the Planet*. Available at: <https://climate.nasa.gov/effects/> [Accessed 11 Sep. 2018].
- Kasen, S., Wickramaratne, P., Gameroff, M. and Weissman, M. (2011). Religiosity and resilience in persons at high risk for major depression. *Psychological Medicine*, 42(03), pp.509-519.
- Lazier, B. (2011). Earthrise; or, The Globalization of the World Picture. *The American Historical Review*, 116(3), p.608.
- MacLean, M. (2009). Anti-apartheid boycotts and the affective economies of struggle: the case of Aotearoa New Zealand. *Sport in Society*, 13(1), pp.72-91.

Martin, J. (2017). Were Jesus, Mary and Joseph refugees? Yes.. [online] America Magazine: The Jesuit Review. Available at: <https://www.americamagazine.org/faith/2017/12/27/were-jesus-mary-and-joseph-refugees-yes> [Accessed 14 Sep. 2018].

Mcghee, F. (2015). The Montgomery Bus Boycott and the Fall of the Montgomery City Lines. *Alabama Review*, 68(3), pp.251-268.

Millar, R., Schneiders, B. and Vedelago, C. (2018). Catholic Church's massive wealth revealed. *The Sydney Morning Herald*. [online] Available at: <https://www.smh.com.au/national/catholic-church-s-massive-wealth-revealed-20180209-p4yzus.html> [Accessed 14 Sep. 2018].

NASA Content Administrator (2017). Earthrise. [online] NASA. Available at: https://www.nasa.gov/multimedia/imagegallery/image_feature_1249.html [Accessed 10 Sep. 2018].

National Research Council (2010). *Informing an effective response to climate change*. Washington, D.C.: National Academies Press, p.269.

Oreskes, N. (2004). The Scientific Consensus on Climate Change. *Science*, 306(5702), p.1686.

Oroeco.com. (2018). Oroeco. [online] Available at: <https://www.oroeco.com/about> [Accessed 14 Sep. 2018].

Pariona, A. (2018). 10 Countries That Could Disappear With Global Warming. [online] WorldAtlas. Available at: <https://www.worldatlas.com/articles/10-countries-that-could-disappear-with-global-warming.html> [Accessed 14 Sep. 2018].

Paris Agreement. (2015). [ebook] Paris: UNFCCC. Available at: https://unfccc.int/sites/default/files/english_paris_agreement.pdf [Accessed 4 Jul. 2018].

Quinn, J., Philip, L. and Murphy, W. (2009). Understanding the recession of the Holderness Coast, east Yorkshire, UK: a new presentation of temporal and spatial patterns. *Quarterly Journal of Engineering Geology and Hydrogeology*, 42(2), pp.165-178.

Rocha, J. (2018). Obituary: Sister Dorothy Stang. *The Guardian*. [online] Available at: <https://www.theguardian.com/news/2005/feb/21/guardianobituaries.brazil> [Accessed 10 Sep. 2018].

Rowell, G. (n.d.). The Earthrise Photograph. [online] Abc.net.au. Available at: <http://www.abc.net.au/science/moon/earthrise.htm> [Accessed 18 Sep. 2018].

Seymour, S. (2009). A Quaker response to the crisis of climate change. [ebook] Available at: <https://quaker-prod.s3-eu-west-1.amazonaws.com/store/6c0c623a175285c705cae5865efc702ffa6dc1887dce3f95edee904a249d> [Accessed 10 Sep. 2018].

Smith, S. (2017). Community comes together after Grenfell Tower tragedy. [Blog] British Red Cross. Available at: <http://blogs.redcross.org.uk/appeals/2017/06/community-comes-together-grenfell-tower-tragedy/> [Accessed 14 Sep. 2018].

Suran, M 2010, 'The separation of church and science. Science and religion offer different worldviews, but are they opposite or complementary?', *EMBO Reports*, 11, 8, pp. 586-589, MEDLINE with Full Text, EBSCOhost, viewed 10 September 2018.

Sustainable Human (2014). How wolves change rivers. [video] Available at: <https://www.youtube.com/watch?v=ysa5OBhXz-Q> [Accessed 10 Sep. 2018].

The Emissions Gap Report 2017. (2017). [pdf] UN Environment. Available at: https://wedocs.unep.org/bitstream/handle/20.500.11822/22070/EGR_2017.pdf?sequen%2%80%A6 [Accessed 14 Sep. 2018].

Thornalley, D., Oppo, D., Ortega, P., Robson, J., Brierley, C., Davis, R., Hall, I., Moffa-Sanchez, P., Rose, N., Spooner, P., Yashayaev, I. and Keigwin, L. (2018). Anomalously weak Labrador Sea convection and Atlantic overturning during the past 150 years. *Nature*, 556(7700), pp.227-230.

Turner, G. (2014). On the Cusp of Global Collapse? Updated Comparison of The Limits to Growth with Historical Data. *GAIA - Ecological Perspectives for Science and Society*, 21(2), pp.116-124.

Unfccc.int. (2015). Hindu Declaration on Climate Change | UNFCCC. [online] Available at: <https://unfccc.int/news/hindu-declaration-on-climate-change> [Accessed 10 Sep. 2018].

Unfccc.int. (2015). Islamic Declaration on Climate Change | UNFCCC. [online] Available at: <https://unfccc.int/news/islamic-declaration-on-climate-change> [Accessed 10 Sep. 2018].

W2.vatican.va. (2016). Message of the Holy Father to the President of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP22) [Marrakech, 7-18 November 2016](10 November 2016) | Francis. [online] Available at: http://w2.vatican.va/content/francesco/en/messages/pont-messages/2016/documents/papa-francesco_20161110_messaggio-cop22.html [Accessed 10 Sep. 2018].

Westphal, L. and Hirsch, J. (2010). Engaging Chicago Residents in Climate Change Action. *Cities and the Environment*, [online] 3(1). Available at: <http://escholarship.bc.edu/cate/vol3/iss1/13> [Accessed 14 Sep. 2018].

White Jr., L. (1967). The Historical Roots of Our Ecologic Crisis. *Science*, 155(3767), pp.1203-1207.

All Bible quotes are from the New International Version, unless otherwise stated.