Student Name Kyle James Branigan
Student ID - 1912980
Programme – BA Documentary Photography & Visual Activism
Module – Visual Enquiry II
Module Code – M5X01609
Assignment Title – Visual Research Proposal
Submission deadline – 21/5/21

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Visual Blog/Research

Theme – Water Pollution, natural and manmade

Waterways – rivers, seas, ponds, reservoirs

Pollution – rubbish, oil, sewage, additives,

Coastal - environment/energy/development/plastic/waste

Local deforestation disease/ welsh government / afan valley

Waste – Industrial/residential

Local energy – pv panels / wind turbines. Water generators /other /stormy down

Industry

Impact eco system

Water-pollution.org.uk

Types of pollution – causes of pollution – prevention of pollution

(Danger to our health, danger to our economy, danger to the environment, global warming)

People – rubbish , plastics, chemical, oils. Water – waste treatments chemicals, fatbergs, renewable energy converting waste into energy. Fishery, Transport/Shipping

Natural

Deforestation – disease, impact erosion, flooding, landslips, waterways, animal habitat

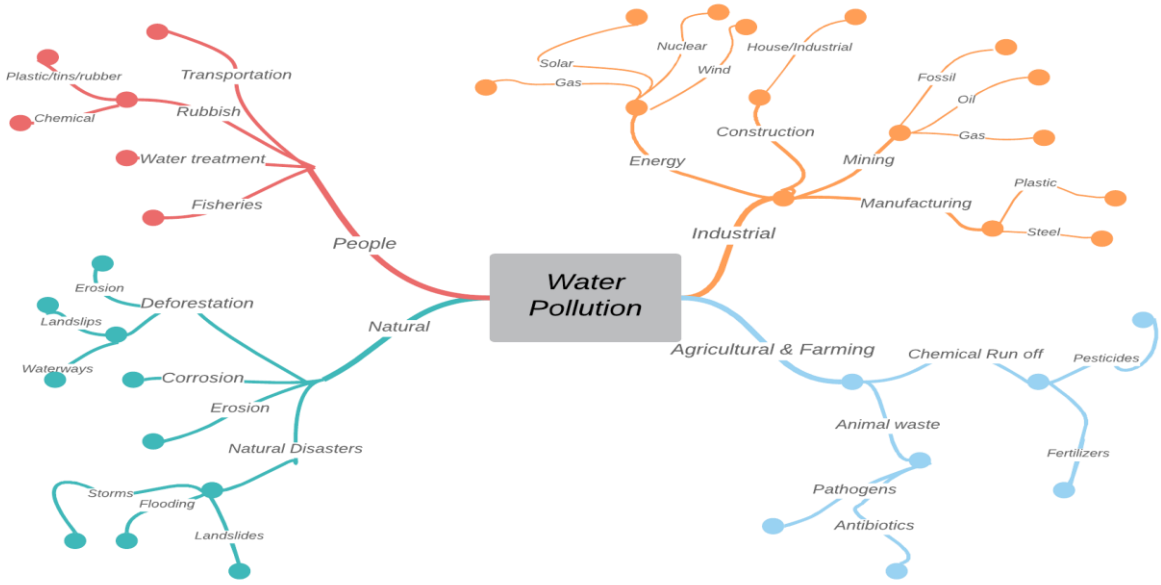
Storms – flooding, damage to habitat ecosystem

Agricultural/Farming/Industry

Heavy Industry – Oil, Gas, Steel Mining

Chemical -Spills, waterways, farming run off, animal waste, pesticides, antibiotics, fertilizers

People – Offshore wind farms, coastal erosions, water treatment/outlets to sea



Three words

Pollution

Deforestation

Industry

Pollution is the effect when there is an introduction of contaminants into a natural environment that cause adverse change. The definition of water pollution is,

> *the release of substances into subsurface groundwater or into lakes, streams, rivers, estuaries, and oceans to the point where the substances interfere with beneficial use of the water or with the natural functioning of ecosystems. In addition to the release of substances, such as chemicals or microorganisms, water pollution may also include the release of energy, in the form of radioactivity or heat, into bodies of water. Britannica.*

Inspirations & Development of Ideas - UK supermarkets warn Brazil over Amazon land bill - BBC News

Nearly 40 UK food businesses have threatened to stop sourcing products from Brazil over proposed land reforms.

An **open letter** from the group calls on Brazil's legislature to reject a bill which could legalise the private occupation of public land.

The letter said the proposal could accelerate deforestation in the Amazon.

The bill is being considered just months after Brazil pledged to end illegal logging.

- **They are killing our forest, Brazilian tribe warns**
- **Celebs to Biden: Reject Amazon deal with Bolsonaro**
- **Brazil cuts environment budget despite pledge**

Sainsbury's, Aldi, Greggs, the Co-Op, the British Retail Consortium, and the Hilton Food Group are among the major organisations to sign the open letter.

A vote in the Senate on **the bill** is expected within days.

Under the leadership of right-wing President Jair Bolsanaro, the level of deforestation in the Amazon is reported as being the highest since 2008.

This year alone around 430,000 acres of the Amazon have been logged or burned, according to the **Monitoring of the Andean Amazon Project.**

The vast majority of land is cleared either to graze cattle for beef exports, or to grow soy, which goes in to animal feed around the world.

At a summit in April hosted by US President Joe Biden, Mr Bolsanaro declared that Brazil would end illegal logging. The letter says these measures "run counter" to this "narrative and rhetoric."
The new law would allow land that has been illegally occupied after 2014 to be put up for sale. This would potentially allow illegal occupants to buy it.
Similar controversial measures were first put forward in a different bill last year, but were withdrawn after more than 40 organisations made the same threat over supply chain sourcing.

Extract from NRW

Pests and diseases currently in Wales. In the last few years, the outbreaks of **P. ramorum (Phytophthora ramorum)**, **Chalara dieback of ash (Chalara fraxinea)** and **Acute oak decline** have raised the profile of tree diseases in the UK and Wales. The impacts of ramorum disease has forced the clearance of very large areas of larch, especially in the **South Wales valleys**. We are learning to cope with established pests such as the **Great spruce bark beetle (Dendroctonus micans)**, **Green spruce aphid (Elatobium abietinum)**, **Dothistroma** and Hylobius.

Occurrence of new pests and diseases. There has been an increase in the occurrence of new pests and diseases in recent years. This appears to be linked to the increase in global trade and travel and the associated movement of plants, wood products, wood packaging and other potentially infected or infested material. Climate change may alter the area over which conditions are suitable for particular pests and diseases. For example, the pine processionary moth (Thaumetopoea pityocampa), a Mediterranean species, is thought to be moving northwards with climate change. Extreme weather events may potentially change the behaviour of native and introduced pests and diseases in unpredictable ways. Climatic stresses such as drought may leave trees more vulnerable to attack.https://naturalresources.wales/guidance-and-advice/business-sectors/forestry/tree-health-and-biosecurity/tree-health-in-wales/?lang=en

Lesley Griffiths, the Minister for Environment, Energy and Rural Affairs, said:

High quality woodland ecosystems can provide real benefits both on a local and national scale. We know that Wales' woodlands enhance our landscape and increase biodiversity and we are committed to ensuring ecosystem services have the ability to respond to climate change and support woodland based industries. We recognise pests, pathogens and invasive non-native species have significant potential to impact on the health of trees and woodlands in Wales. The refreshed strategy will play a key role in minimising the social, environmental and economic impacts of P. ramorum in the CDZ2 area whilst maintaining our commitment to managing the spread of the disease. https://gov.wales/revised-strategy-launched-management-tree-disease-affecting-larch

Neil Muir, from NRW, said: "Tackling this disease in our larch trees is a difficult task.
"We are working on a new Welsh government strategy which aims to slow down the disease by felling in new areas of infection.
"However, there is a positive side to this disease as we have a once in a lifetime opportunity to redesign the forests we manage to make them more resilient to disease and a better place for people and wildlife."
https://www.bbc.co.uk/news/uk-wales-south-east-wales-27055000

Case Study 1

Delivering social, economic and environmental benefits through partnerships

In the 1990s, compliance with the EC Bathing Water Directive increased in response to sewage treatment improvements by Dŵr Cymru Welsh Water (DCWW) as part of their Asset Management Programme (AMP). However, achievement of more stringent "Guideline" standards was not achieved at all sites, hindering attempts to obtain the prestigious Blue Flag status and potentially impacting on tourism revenue. It was found that the large point source discharges (from treatment works) were masking the effects of diffuse pollution sources and a project was set up to identify and address these.

The diffuse issues, which contributed to the bacterial loading of many bathing beaches included, for example: incorrectly connected foul drainage; badly managed private sewage treatment systems at caravan and camping sites; un-maintained septic tanks serving dwellings and public toilets and poor management of run-off from livestock rearing areas. These issues were addressed with the cooperation of the owners, for example, stock control practices on certain farms were changed, with supplementary feeding systems moved and better control of stock access to watercourses.

In addition to improving local bathing water quality, this project's work developed a more focussed approach, formed partnerships with other regulators and beach users and shared best practices across the UK.

Removing sources of diffuse pollution is vitally important. Keeping livestock out of watercourses can reduce nutrient enrichment and help to protect sites of significant economic importance, such as designated bathing beaches around the Welsh coast.

Diffuse Water Pollution in Wales (naturalresources.wales)

Many parts of the UK have suffered from the decline of heavy industry, but the Welsh valleys are a grim emblem of the despair that lack of work can create, writes Mark Easton for The Editors, a programme which sets out to ask challenging questions.

It is a journey I have been meaning to make for years. To Blaenau Gwent in the valleys of South Wales. To proud old colliery towns like Cwm, stretched out along the River Ebbw.

From the window of the bus snaking up the valley road, one is struck by how the rich joyous beauty of the landscape contrasts with the poverty and melancholy of the people who scratch out a living in these parts.

The numbers tell a long and sad story of decline. "We are top of every league you don't want to be top of," a man tells me. Poverty, sickness, worklessness - Blaenau's name is always among the worst.

The unbearable sadness of the Welsh valleys - BBC News

Our Priority Areas for Action to Tackle Diffuse Water Pollution in Wales

(Central map shows locations of particular concern where diffuse pollution is causing water body failures).

Livestock

The sustainable management of some 8.6 million sheep, 275 and 237 thousand head of dairy and non-dairy cattle respectively, presents a significant challenge.

Poor practices are likely to be contributing to failures at these specific water bodies.

Misconnections

Occurring across Wales pipe work in properties carrying sewage or trade waste is often wrongly connected to surface water drainage systems. Visits to over 1000 properties in Swansea have revealed that over 15% have incorrectly connected pipe-work resulting in untreated discharges to the local environment.

Abandoned Mines

Wales has a history of mining and quarrying for construction material, metals and coal. A large number of these activities have now ceased, however, rainfall, surface and ground water still flows through the abandoned workings, leaching out metals and making many of the discharges acidic. This polluted drainage has severe environmental impacts and likely to affect these specific water-bodies.

Industrial Estates

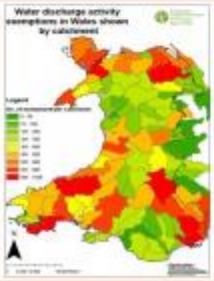
There are at least 350 industrial estates in Wales. Regularly changing occupancy of multiple units creates a challenge for their effective environmental management.

Surface Water Drainage

In many urban areas in Wales our sewer systems are unable to cope with the volume of rainwater that enters them. This causes flooding and sewage discharges. It is estimated that to resolve this problem in Llanelli alone will cost £150m.

Oil Storage

Throughout Wales poorly constructed and/or managed storage of chemicals, fuel and oil are frequent sources of environmental contamination.



Private Sewage Discharges

There are over 50,000 known septic tanks in Wales discharging partially treated waste into the ground. Recent work indicates that the highest number of such systems are located at the red areas here:

Land Management

At~79% of the land-use in Wales, agriculture dominates the landscape. It is not the only cause of water pollution, e.g. at ~14% of the land-use in Wales, a legacy of issues caused by the historic drive to quickly increase the provision of timber in the UK makes forestry a contributory factor to failures at these specific water-bodies:

This quick guide outlines the various Directives associated with improving water quality in Wales. This includes the *Water Framework Directive*, the *Bathing Water Directive* and the *Nitrates Directive*. It also examines whether Wales has met the targets of the Directives.

What is the Water Framework Directive?

The ***Water Framework Directive (2000/60/EC)* (WFD)** came into force in December 2000 and became part of UK law in 2003. The WFD introduces a consistent approach to water management and has replaced a number of previous European Directives.[1]

The WFD is the most substantial piece of European Community water legislation to date and is designed to improve and integrate the way water bodies are managed throughout Europe. It applies to all surface freshwater bodies (including lakes, streams and rivers), groundwaters and associated ecosystems, estuaries and coastal waters out to one mile from low-water. The WFD aims to:

– reduce pollution and improve the condition of aquatic ecosystems;

– promote the sustainable use of water; and

– reduce the effects of floods and droughts.[2]

The WFD is implemented in stages based on river basins, rather than national or political boundaries, through River Basin Management Plans (RBMPs), (detailed later).[3] Reviews of the RBMPs will take place every six years. Ultimately Member States must monitor, protect, enhance and restore all surface and ground water bodies.

The WFD classification scheme for water quality includes five status classes: **'high', 'good', 'moderate', 'poor' and 'bad'**. 'High' status is defined as the biological, chemical and morphological conditions associated with no or very low human pressure (the reference condition). Assessment of quality is based on the amount of deviation from the reference condition; 'Good status' means 'slight' deviation, 'moderate status' means 'moderate' deviation, and so on.

QG15-004.pdf (senedd.wales)

https://www.independent.co.uk/climate-change/news/deforestation-england-forestry-commission-woodland-trust-environment-climate-change-a8399726.htmlEngland 'highly likely' to be suffering from deforestation, campaigners warn | The Independent | The Independent

But campaigners warned the figure was far below the 5,000 hectares a year needed to increase England's woodland cover to 12 per cent by 2060, an ambition set out by the Government in the wake of the failed public forest sell-off.

Poor planting rates, woodland losses and weak protection of ancient woods means that England is likely to be experiencing net deforestation, with areas felled or destroyed and not replanted, the Woodland Trust warned.

Woodlands cover just 10 per cent of England, but they are important strongholds for native broadleaf trees which are rich in wildlife.

Since the plans to increase cover were announced six years ago less than half the necessary level of woodland planting has been achieved.

John Tucker, director of woodland creation, Woodland Trust, said: "These figures are all the more shocking considering the growing evidence of the importance of trees and woods in tackling air pollution, improving water quality and offering scope to deliver natural flood management, not to mention what they offer for wildlife and their productive potential for the rural economy.

"Something is drastically wrong with the way various government departments that share responsibility for trees and woods are failing to get enough new woodland created."

Deforestation | Syngenta Photography Award Exhibition

Each year, an area of forest three times the size of Wales disappears.

Deforestation occurs for a number of reasons, including agricultural development, cattle-grazing, and urban expansion, but the forest's complex ecosystems are vital to the carbon and water cycles that sustain life on earth. Forests cover 30% of our landmass and play a critical role in mitigating climate change due to their absorption of carbon dioxide. In comparison, it is estimated that 12-17% of greenhouse gas emissions result from deforestation.

In order to continue providing habitat for many of the world's most endangered animals and the 1.6 billion people who live in or depend upon them for their livelihood, forests must be maintained and nurtured. A symbiotic relationship in which people can work in harmony with the forest and its products would ensure forested areas remain intact and sustainable.

There are many impacts this substantial loss of tree canopy and forest cover will have on our planet if allowed to continue, not only because of their essential link to climate change and biodiversity loss, but because trees are also a vital deterrent to other ravages of a dramatically changing, overheated and destabilised climate, such as sea-level rise, water scarcity, drought and flooding. In this article, we will focus particularly on how deforestation contributes to flooding, both in the wider global picture and within the UK.

Deforestation and climate change

Deforestation accounts for 8% of the world's greenhouse gas emissions – to put this into a proportional geographic context, this comes third below all of the emissions currently produced by the US and China.

Forests serve as the Earth's temperature regulator and pollution filter. They not only provide shade, material for building and food for creatures including man, but they also act as a vital 'carbon sink', meaning they absorb carbon dioxide and monoxide molecules from the air and lock them in, re-releasing them as oxygen through the process known as photosynthesis. Thus, they are effectively nature's air-conditioning

Deforestation and Flooding – Small Writer at Large

Potential questions

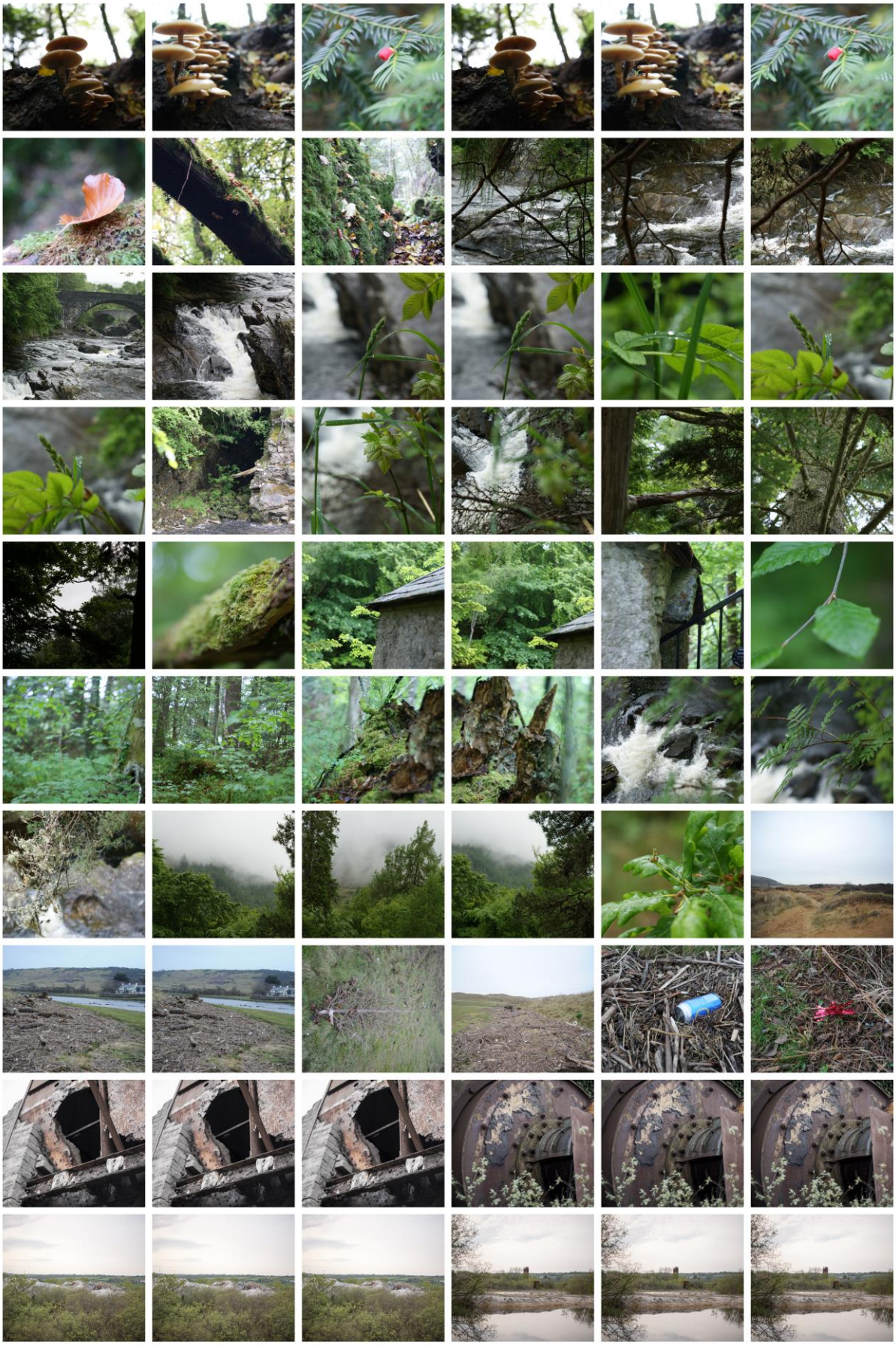
Has the decline in heavy industry in Wales in the last 50 years, had a positive impact on water pollution?

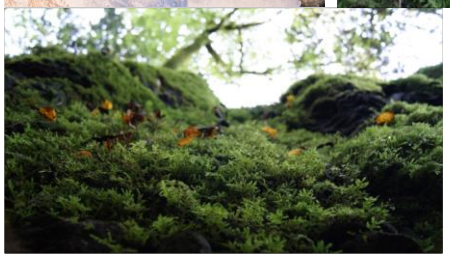
Has the diseased trees in the South Wales valleys contributing to climate change and its effects in the area.

Is plastic pollution the main contributor to coastal pollution in Wales or are the 'hidden factors' of deforestation and agricultural waste causing more harm than plastic in our waterways?

Is recycling masking the problem of pollution. We assume that recycling is good for the environment but has that made us more complacent.

Exploration of images contact sheets





Artists/Thinkers

Andy Hughes

Daniel Betra, Sean Gallagher, Zena Holloway, Andy Hughes, David Attenborough, Sebnem Coskum, Edward Burtynsky, David Wissah,

Daniel Beltro/Princes Rainforest Project 2009

Aerial view of a log sorting yard carved from the Amazon rainforest near Altamira, Para state, Brazil, September, 2013.

icans (Pelecanus occidentalis) covered in crude oil from BP's Deepwater Horizon wellhead spill wait to be cleaned at the International Bird Rescue Research Center in Fort Jackson, Louisiana, June, 2010.

Sebnem Coskun 2019 Ciwem environmental photographer of the year

Fig 1. Holloway, Z. (2020). [Photogram]

'Photographed in the ocean around the island of Bimini, close to the mystical Fountain of Youth; a fabled wellspring thought to give everlasting life to whoever bathed in or drank from it.' (Glassbook, 2020) A quotation from *Zena Holloway* Interview with Manual Productions

> *"The oceans used to represent an escape, a space to disappear in; but less so now. There's no getting away from human impact, even underwater. In my lifetime I've seen the quality of our oceans decline. The Anthropocene is a scary reality and with words like drought, melting ice caps, flood, rising sea levels and ocean acidification I often think that water is the face of climate change. Our oceans, lakes and waterways are the lifeblood of our planet and increasingly, they are being shaped by human processes. I see water as a bridge between us and the natural world. Capturing this connection is what informs the images I create" Zena Holloway*

A JOURNEY DOWNSTREAM

Rivers have run through our civilisations like strings through beads since the beginning of time. They tell a story of the land and the people who loved, laughed, struggled, fought and crossed the river before us. From the waterline passers-by become like Lowry's painted matchstick men; their characteristics washed away in the flow. The view from underwater reframes this perspective, inviting questions about how the fates of these rivers and the people above are connected.

In recent years Northern Europe has experienced some of the hottest and driest summers since records began. The water levels in our rivers are falling and yet demand for water continues to grow. In 2019 a major campaign was launched to encourage the nation to '**Love Water.**' The British public are being asked to help the country protect water resources for future generations. It's part of a major initiative by more than 40 environmental groups, charities, water companies and regulators.

Zena Holloway River series

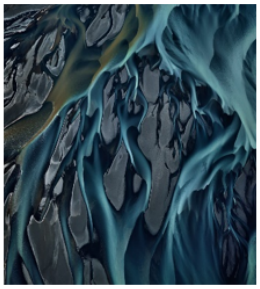


Fig 3 Edward Burtynsky's Water series showcases oils and chemical spills in rivers and oceans. *Burtinsky travelled to capture BP's oil spill in the Gulf of Mexico in 2013 and this quote depicts that whilst this was a large-scale spill this was still not reported on international news channels.*

> *"I understand that it has an editorial aspect to it, but nothing I photograph is typically a news event. I'm not so much into chasing disasters as I am into looking at big industrial incursions into the landscape or in this case, the seascape." Burkynsky*

OIL

Artist's Statement

"When I first started photographing industry it was out of a sense of awe at what we as a species were up to. Our achievements became a source of infinite possibilities. But time goes on, and that flush of wonder began to turn. The car that I drove cross-country began to represent not only freedom, but also something much more conflicted. I began to think about oil itself: as both the source of energy that makes everything possible, and as a source of dread, for its ongoing endangerment of our habitat.

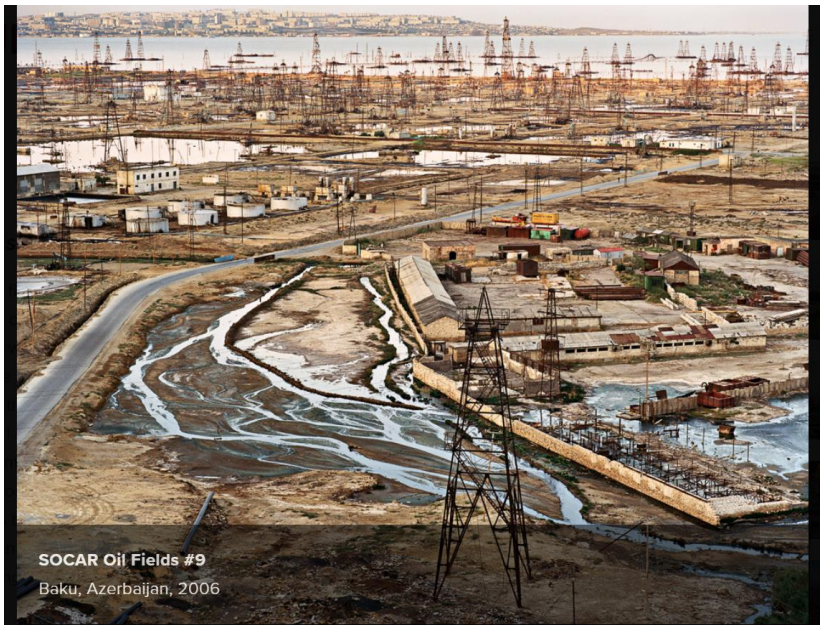


Fig 4. Wissah, D (2019) [Photogram]

Fig 4.

In Fig 4, Frederick Dharshie Wissah, winner of Water, Equality and Sustainability prize for his image Water Scarcity captured the emotive image of a young boy drinking from muddy water a resultant negative effect of deforestation in the area. This image is a commonplace plight for many and the mass destruction of forests in the UK could affect our water supply and chemical imbalances within the local ecosystem. Could this be our future if we do not replant what is being destroyed by disease?

Fig 5. Hughes, A (2012) [Photogram]

Surfers against sewage

Andy Hughes

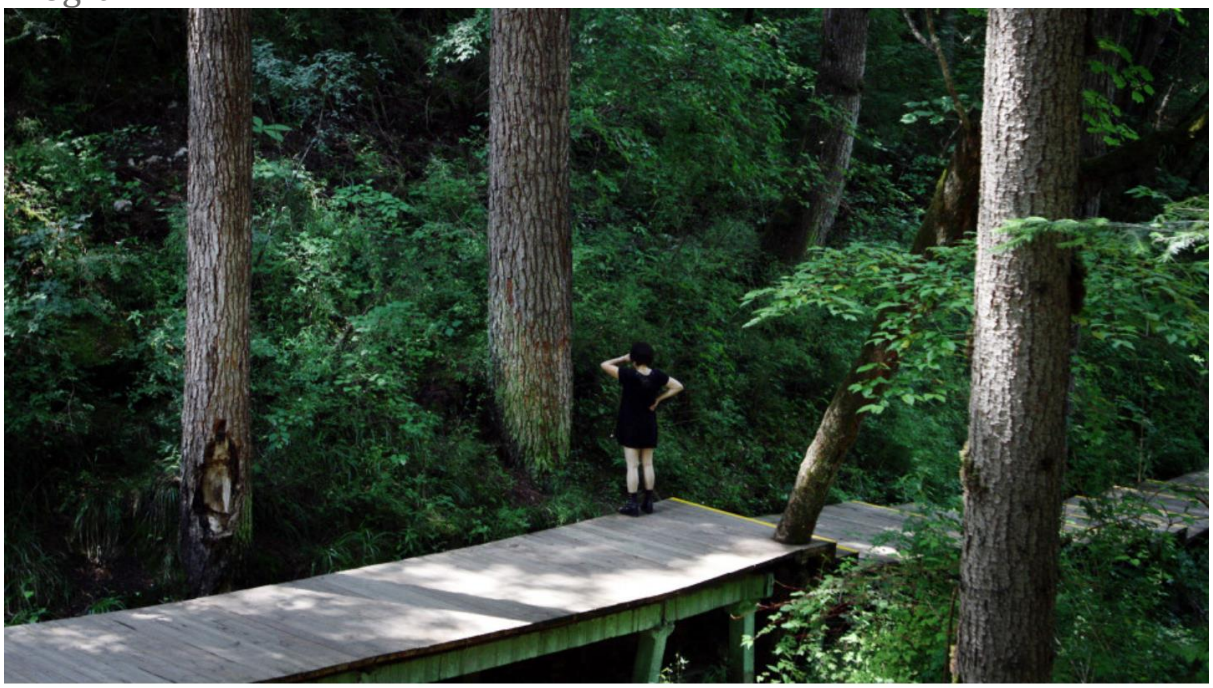
Andy Hughes work focuses on the littoral zone and the politics of plastic waste. His photographic artworks are preoccupied with the 'thing-ness' of plastic, watery worlds and coastal habitats and include recent ventures into gamification, ruinology and poetry. His practice therefore draws on philosophy, literature, art and film, including archival film, as well as interfacing with scientific research. He is interested in radical conceptions of materialism and the implications this has for politics, ecology and the everyday way we think of others, the world, and ourselves.

In 2013 was one of three artists invited to join the worlds first project to explore the integration of science and art to document and interpret the issue of plastic pollution in the marine and coastal environment.

Sean Gallagher

This is a small part of China's "Western Development Strategy" which was introduced in 1999 and formally started in 2000 by the country's State Council. The aim of the strategy is to help the underdeveloped western provinces of the country catch up with the more prosperous ones in the East. This race to catch up has caused concerns among the environmental community as rushed developments compromise local ecosystems, especially the remaining forested regions of the southwest of China.

“At stake are some of the most valuable scenic sites and endemic flora and fauna in China together with critical hydrological services affecting the supplies of the Yangtze River, flood and erosion control and prevention of landslides,” according to a study by the EU-China Biodiversity Program.



The relationship between the people of the region and the forests is a fragile one as the west of China continues rapid development trying to catch up with the progress of the east.

Guardian-Sri-Lanka-Human-Elephant-Conflict-2016

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Fig 1. Beltra, D (2010) [Photogram]

Fig 2. Beltra, D (2009) [Photogram]

Fig 3. Wissah, D (2019) [Photogram]

Word count – 222

Context

Within my visual research proposal, I will explore cause and effect of detritus in the waterways in Wales. My passion of raising awareness of detritus isn't waning; although up to now I have targeted plastic pollution left along the coastline. During my research I have explored climate change and detritus as a bigger issue and evaluating whether plastic is the biggest risk to our waterways or are the hidden issues such as diseased trees in Wales causing more pollution in our rivers. Besides the esthetical disturbance of plastic in out oceans and rivers it has an impact on the fauna, flora and wildlife, which has a devastating effect on the ecosystem lifecycle. I am a firm believer that our social ideology of its someone else's problem, must stop before we cause irreversible damage to the planet. During my exploration, I plan to expand my location and type of waterways to prove if we take more notice of plastic pollution than any other form of pollutants. My visual research will examine the following artists and activists who have similar passion as myself Daniel Beltra, Sean Gallagher and Andy Hughes. I will continue to visually present plastic pollution with exploring other pollution, agricultural and industrial and deforestation. I will use research articles, environmental reports and scientific papers as investigatory articles alongside media documentary resources.

Fig.1

Fig.2

Fig. 3

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