

Visual Expression –GRA1186M

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Project: Climate Action (Cop 29)

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‘The denial of the climate and ecological crisis runs so deep that hardly anyone takes real notice anymore.’

— Greta Thunberg.

Overview:

Climate change is already wreaking havoc around the world, and it's happening faster, harder, and in more terrifying forms than anyone predicted. Hotter temperatures are causing droughts, heat waves beyond the limits of human tolerance, and rising seas that will submerge many of the islands, cities and countries that we live in today.

Climate change is not just an environmental issue, but a global crisis. We can't afford to wait for further destructive consequences before we call for action!

In November, the UK, together with our partners Italy, will host an event many believe to be the world's best last chance to get runaway climate change under control. For nearly three decades the UN has been bringing together almost every country on earth for global climate summits – called COPs – which stands for ‘Conference of the Parties’. In that time climate change has gone from being a fringe issue to a global priority.

This year will be the 29th annual summit – giving it the name COP29. With the UK as President, COP29 takes place in Azerbaijan <https://cop29.az/en/home>.

While mitigation is essential, we must also find ways to adapt to the unavoidable impacts of climate change. Following this, the challenges focus are two-fold:

1. We have to adapt to more frequent and intense natural disasters, as well as weather patterns that we've never had to cope with before. We also have to deal with the effects: food and water shortages, homelessness, ill health, mass migration, and conflict.

2. We have to adapt to a new energy reality. We depend on energy for our food and water supply, housing, clothing,

medical care, and transportation – from the basics to relative luxuries. We have to change our ways in order to survive beyond the age of fossil fuels. Consider how we change the way we live, eat, use water or use energy.

Project

DESIGN STORIES TO HELP PEOPLE IMAGINE NEW WAYS OF LIVING AMIDST CLIMATE CHANGE

Designers are powerful storytellers. This visual communication skill is much needed to educate people about and help them imagine the changes they need to make in their lives to adapt to shortages or disasters caused by climate change. Climate change affects everything in our life, from our water to food, energy and housing and it is your job to research, ideate, explore, develop and refine a “Concept” using a range of methods provided in current (and ongoing) workshops and one of the themes set out below.

The final work should document the ideas, process (figjam) and a refined output which could be, but not limited to, a poster, book, app, interface, game, AR, projection map, installation, packaging, signage, anything. Consider your design sprints and experiment with a range of ideas and outputs as part of an iterative process. It should be based on clear personas, scenarios and user requirements. The finished works should be presented in a professional manner supported by clear research and experimentation in Figma or Figjam. Process from physical sketch books will need to be digitised and added to your Figjam.

1:FOOD

What can design do to inspire change in the UK's eating habits?

THE CHALLENGE

Changes in the climate mean that food sources we are used to eating may no longer be available. Extremely high and low temperatures can destroy crops and kill livestock and marine life, while a higher incidence of pathogenic bacteria due to hot temperatures could make some foods more dangerous to eat. We need to learn to eat differently to avoid food shortages and famine.

THE OPPORTUNITY

Create and deliver stories that build on real-life personal stories to show people how an alternative diet of 'climate-change-proof' foods can be even more delicious, convenient, affordable or healthy than their current diet. This could be achieved by educating consumers about biodiversity, ecosystems and food sources, possibly using local, traditional or indigenous knowledge.

2:ENERGY

What can design do to inspire people to cope with energy shortages or blackouts in the UK due to climate change?

THE CHALLENGE

Consequences of climate change such as extreme or unusual temperatures and natural disasters can reduce access to energy. For example, storms can damage power lines, while floods can destroy firewood. High demand for energy during heat waves and prolonged cold weather can also cause blackouts due to strain on the grid. In many cases, individuals are ill-equipped to cope without energy.

THE OPPORTUNITY

Create and deliver stories that build on real-life personal stories to teach people how to cope with energy shortages while still fulfilling their daily needs. This could be done by raising awareness about how renewable technologies can be used in place of conventional energy sources, or by showing people how to use passive solutions involving ventilation, insulation and sunlight. You could also educate people on how to reduce and prioritise energy consumption.

3:HOUSING

What can design do to inspire people in the UK to adopt more resilient forms of housing?

THE CHALLENGE

Many people live in homes that will be damaged or destroyed by rising seas, storms, floods and heat waves caused by climate change, possibly endangering their life. Many of them find it difficult to consider moving or significantly adapting their home due to financial, social, personal and cultural factors.

THE OPPORTUNITY

Create and deliver stories that build on real-life personal stories that empower people to strengthen their own homes or relocate to avoid damage due to climate change. You could explore how to raise awareness about the need for relocation due to climate risk. This could be achieved by demonstrating the additional benefits of moving or adapting homes, such as higher quality of life or better health. It could also be achieved by educating people about how to adapt their homes using existing, affordable and accessible technologies.

4:HEALTH

What can design do to inspire people to reduce the health risks in the UK caused by extreme weather?

THE CHALLENGE

Higher temperatures will cause heat-related deaths and illnesses, and worsen air quality, causing respiratory and cardiovascular diseases. Burning conventional fuels also produces toxic air. Mosquitoes and ticks will also thrive in hotter weather, leading to a higher infection rate of malaria, dengue, and Lyme disease. Higher temperatures will also breed more pathogenic bacteria in food and water, leading to diarrhoea.

THE OPPORTUNITY

Create and deliver stories that build on real-life personal stories that educate people about existing and accessible practices to prevent illness and infection. Think about the ways in which hygiene and sanitation practices have been spread and taught. Explore ways in which people can be empowered to live their life to the fullest without falling sick. If your region is not at risk from heat-related disease, consider how to combat air pollution from conventional energy sources.

5:WATER

What can design do to inspire people in the UK consume water more responsibly.

THE CHALLENGE

Climate change will cause fresh water shortages, sometimes due to insufficient rainfall, and sometimes due to a breakdown of centralised water utilities. Irresponsible consumption and unfair distribution in these circumstances leads to other consequences such as illness, death and conflict.

THE OPPORTUNITY

Create and deliver stories that build on real-life personal stories to educate people on the impact of their water consumption. This could involve empowering them to store their own water. Consider leveraging indigenous, traditional and local knowledge to prioritise water consumption where it is needed, or utilising existing technologies and methods for managing water.

Additional Insights

The UK (Europe)

The UK will suffer from flooding in river basins and coasts, from water restrictions, and from wildfires. Both acute disasters and the long-term consequences of a changing climate will cause economic losses and reduce labour productivity.

Extreme levels of rainfall are already causing frequent flooding, which damages housing, infrastructure, power lines and transportation, and leaves people without clean water, medical treatment, light and a means to cook food. Increasing urbanisation and urban density is also a contributing factor to floods, as more paved ground and built areas prevent the ground from absorbing rainfall. Coastal erosion and rising sea level due to melting ice-caps also threatens seaside populations with floods.

Heat waves are becoming more common in Europe, causing illnesses and health problems, particularly among the elderly. According to UNISDR, 90 percent of the total deaths relating to heat waves were recorded in Europe (2015). Heat waves can also reduce water resources (drainage and runoff) as a result of more water evaporating, particularly in southern Europe. Hotter summers will also lead to crop failure, which has enormous economic impact: droughts have cost over €100 billion in the past 30 years. Temperatures in mountain ranges such as the Alps and the Pyrenees are predicted to rise to temperatures that will melt glaciers.

The Mediterranean area and the Russian boreal area is becoming drier, making it more vulnerable to drought,

which is causing crop failures and wild-fires. The fumes and air pollution from wildfires cause respiratory illnesses and aggravate existing conditions. Extreme weather events such as wild-fires have a big impact on health, including mental health. All over Europe, pollution from cars increases concentrations of ozone near ground level, which causes 21,000 hospital admissions a year. The number of people hospitalised for respiratory problems due to particulate matter exposure from car exhaust is almost five times that.

LOCAL CHALLENGES IN EUROPE

- Overall, 92% of deaths from heat waves were recorded in high-income countries, with Europe reporting the lion's share at 90%. More than 55,000 people died during a heatwave in Russia during the summer of 2010, while Western and Southern Europe experienced major heat waves in 2003 and 2006 which killed more than 72,000 and 3,400 people respectively. (UNISDR 2015)
- UK's National Flood Resilience review found that 530 critical infrastructure sites, such as water and telecoms, are at serious risk from floods, each potentially affecting at least 10,000 people. (The Guardian, Sept. 2016)
- Monthly rainfall averages fell by as much as 80% in parts of France, and parts of northern Spain experienced daily temperatures over 30 degrees for more than 40 consecutive days. (EDO; The Guardian)
- A heatwave in 2003 likely caused over 500 premature deaths in Paris and London, among an estimated tens of thousands of deaths across the whole of Europe. (Environmental Research Letters)
- In 2030, under a high CO₂ emission scenario, more than 400 attributable deaths per year are expected in Athens, Budapest, Paris, and Rome. (European Commission)
- Researchers assessing the impact of drought have found that the south of France, Italy and the Balkans will be most negatively affected with periods of water shortages and lowered river flow levels. [European Commission's Joint Research Centre (JRC)]
- In January 2017, air pollution in London surpassed its annual limit in five days.

Suggested Schedule

Week 1: Introduction and Ideation

Objective: Understand the theme and brainstorm ideas.

- Introduction to Theme: Brief lecture or discussion on “Living with Climate Change.”
- Brainstorming Session: Group activity to generate ideas and concepts.
- Research: Individual research on climate change impacts and solutions.

Week 2: Concept Development

Objective: Develop initial concepts and sketches.

- Concept Sketching: Create rough sketches of ideas.
- Feedback Session: Peer review and feedback on initial sketches.
- Refinement: Refine concepts based on feedback.

Week 3,4,5: Design Experimentation

Objective: Experiment with different design techniques and mediums.

- Technique Exploration: Try out various graphic design techniques (e.g., digital, print, mixed media).
- Prototype Creation: Develop prototypes of the refined concepts.
- Iteration: Iterate on designs based on experimentation results.
- Clearly show demonstrable progress in sessions

Week 6: Finalisation and Review

Objective: Finalise designs and prepare for presentation.

- Final Design: Complete the final version of the design.
- Presentation Preparation: Prepare presentation materials (e.g., slides, mock-ups, Figjam).
- Presentation: Present the final designs to the class for critique and discussion.

Week 7: Formative Review (Week 17)

Objective: Finalise designs and prepare for presentation.

Learning Outcomes:

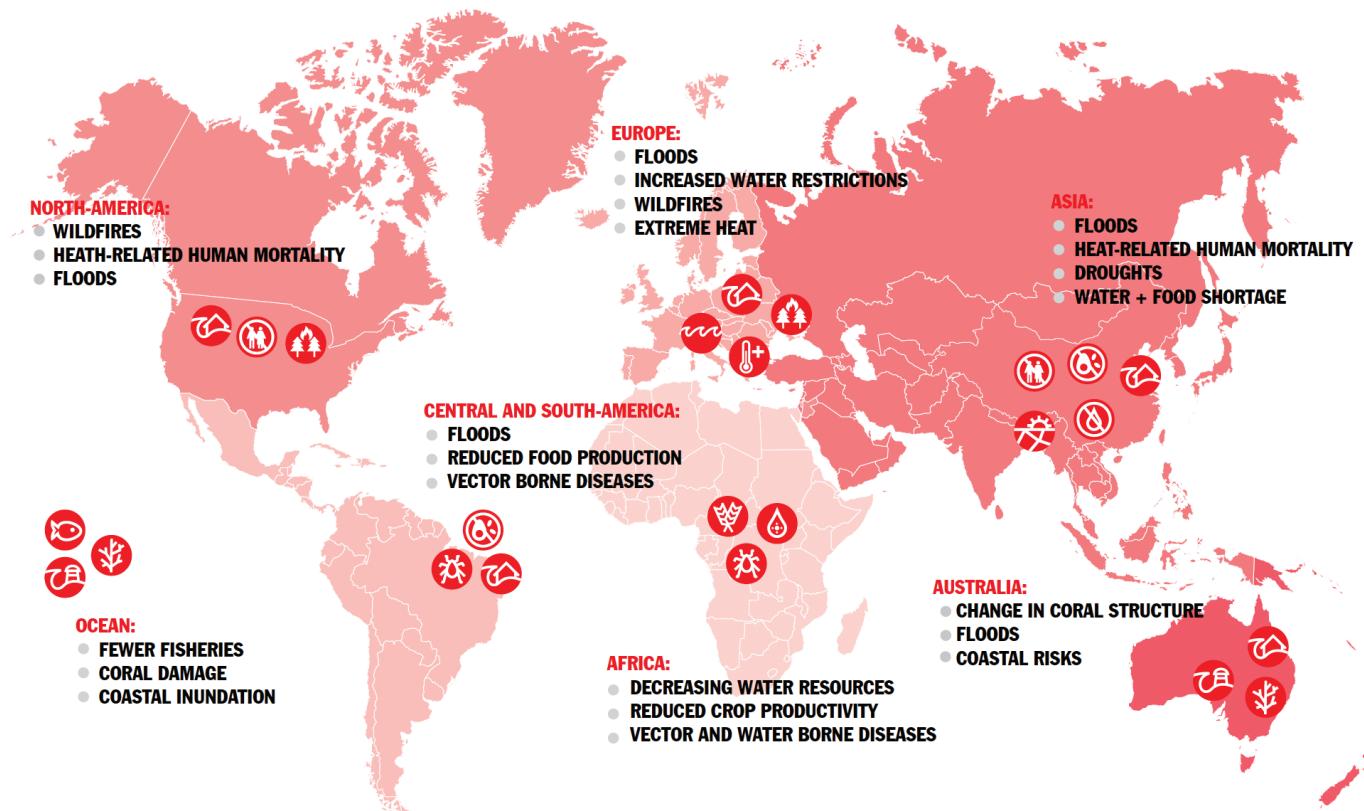
LO1 Able to demonstrate a broad range of methods for information gathering, research, analysis and synthesis appropriate to visual practice.

LO2 Able to provide evidence of an extended visual vocabulary and creative speculation via the application of the principles and practices of visual communication along with the development of creative design solutions through a range of print, screen, lens and spatial media.

LO3 Able to address ideas and realise solutions that explore the themes and practices of narrative, time, movement, the still and moving image.

LO4 Able to demonstrate appropriate conduct along with health and safety requirements within studios, workshops and computer labs.

Regional Risks:



KEY RISK	CLIMATIC DRIVERS	TIMEFRAME	RISK & POTENTIAL FOR ADAPTATION		
			Very low	Medium	Very high
Increased economic losses and people affected by flooding in river basins and coasts, driven by increasing urbanization, increasing sea levels, coastal erosion, and peak river discharges (high confidence).		Present			
		Near term (2030-2040)			
		Long term (2080-2100)			
Increased water restrictions. Significant reduction in water availability from river abstraction and from groundwater resources, combined with increased water demand (e.g., for irrigation, energy and industry, domestic use) and with reduced water drainage and runoff as a result of increased evaporative demand, particularly in southern Europe (high confidence).		Present			
		Near term (2030-2040)			
		Long term (2080-2100)			
Increased economic losses and people affected by extreme heat events: impacts on health and well-being, labor productivity, crop production, air quality, and increasing risk of wildfires in southern Europe and in Russian boreal region (medium confidence).		Present			
		Near term (2030-2040)			
		Long term (2080-2100)			

CLIMATE-RELATED DRIVERS OF IMPACTS



LEVEL OF RISK & POTENTIAL FOR ADAPTATION



CONFIDENCE OF IMPACTS ATTRIBUTED TO CLIMATE CHANGE

