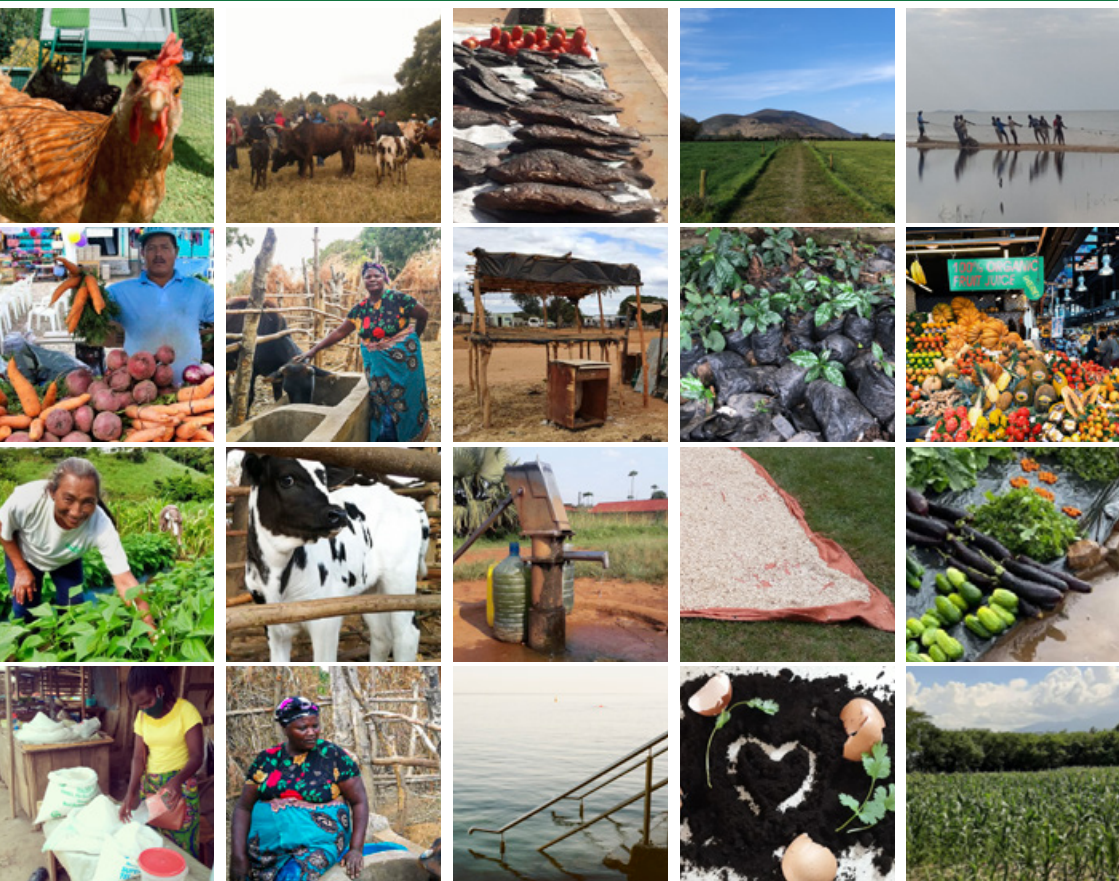


GOAL

#Connected2: Climate and Food Systems



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Acknowledgements

GOAL expresses its deepest gratitude to the thirty brilliant young creators of this resource, all part of the 2021 GOAL Global Youth Programme, and from across the globe. Their names are listed on page 10.

Special thanks to Aislin Lavin for her tremendous effort in bringing together a group of young leaders across the globe who produced these photo essays. We also want to thank Niall Crowley and Eileen Timmons who both gave insightful guidance to the Global Youth Programme participants as they created this resource. A huge thank you to Neda Naeel for her brilliant work in piloting the Photo Essay Activity, which you can find at the end of this booklet.

Finally we want to thank all the members of the 2019 GOAL Volunteer Youth Advisor Project and the GOAL 2020 Youth Programme who laid the foundations for what the GOAL Global Youth Programme has become.



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Foreword

To young people, creatives, leaders, and activists across the Globe,

I am delighted to share with you “#Connected2: Climate and Food Systems”, a visual resource presented as Photo Essays, designed to emphasise the ways in which we are all connected through global food systems and climate change.

Throughout 2021, this resource’s Photo Essays were created by GOAL’s Global Youth Programme: thirty like-minded participants from Ethiopia, Honduras, Malawi, Uganda, Zimbabwe and Ireland. These inspiring young people worked together to explore their own interconnectedness and question the links between global food systems and climate change.

The process for creating this resource has been thorough and inclusive. In 2019, GOAL consulted young people in Malawi and Ireland to help create a GOAL Global Youth Programme, an initiative put on a formal footing in 2020. A steering group assisted in recruiting the participants and guided the evolution of the programme with their expertise and insights. The young minds behind this resource analysed the links between the local and the global, while querying their own role in achieving change. The end result reflects a strong spirit of inclusivity, solidarity, collaboration, and urgency. This year’s programme focuses on global citizenship

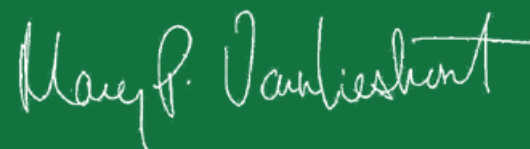
and the interconnected roles of individuals, organisations, and sectors engaged in international development. Through the pertinent themes of Global Food Systems and Climate Change, participants learned how each relates to global citizenship and development. Based on their learning and individual interests, participants explored the role of public awareness-raising campaigns in attitude and behaviour change. Participants produced materials in the lead up to the UN Food Systems Summit, COP26, and throughout GOAL’s #Connected2 campaign.

As a Humanitarian and Development Agency, GOAL encounters daily the challenges facing the global community. It is not possible for any one country, community, or sector to end poverty, fight inequality, tackle climate change and provide sustainable livelihoods. We must collaborate to become a global network of citizens, united in our ambition to improve our world.

Wherever you are, you are a global citizen, an agent of change, and we invite you to join us on this journey.

#Connected2

Thank you,



Mary Van Lieshout

Deputy CEO and Head of External Affairs

ABOUT GOAL

GOAL'S VISION

GOAL believes in a world where poverty no longer exists, where vulnerable communities are resilient, where barriers to well-being are removed and where everyone has equal rights and opportunities.

THE GOAL GLOBAL CITIZENSHIP PROGRAMME

The GOAL Global Citizenship Programme is founded in the global interconnections and universality at the heart of the UN Global Goals. Using the evidence and insights of our work across the globe, and by amplifying the voices of the communities we work with, we engage students, teachers, educators, young people, decision-makers and the general public to strengthen global citizenship competencies and take action in pursuit of a more equal, fair, and sustainable world.

Check out our programmes at:
www.goalglobal.org/youth/



GOAL GLOBAL YOUTH PROGRAMME

The GOAL Global Youth (GGY) Programme is a 4-month engagement with young people in Ireland and select GOAL programme countries focused on creating the learning and empowerment opportunities necessary for positive youth-led change. Through participatory methodologies and cross-cultural collaborations, youth programme participants deepen their understanding of global citizenship and linked global justice issues. Much more than a once-off programme, all alumni participants of the GGY Programme join GOAL's Global Youth Network as the facilitators and multipliers of GOAL's message of global citizenship. Each year participants of the programme work towards creating a resource just like this Photo Essay Resource Booklet.

ABOUT THE PHOTO ESSAYS

WHY PHOTO ESSAYS?

The Photo Essays you will find here are the result of small groups of young people from across the world coming together to discuss what climate change and food systems mean to them. The Photo Essays emphasise the ways in which all people and communities are #Connected2 each other through experiences of climate change and global food systems. They are windows into the lives of our friends.

WHY CLIMATE CHANGE AND FOOD SYSTEMS?

The global food system is deeply interconnected: events in one part of the world can have a huge impact, whether positive or negative, across the

world. Climate change is the defining threat of our time, a global problem that has knock-on effects for all sorts of other issues.

We must work together to combat climate change, and to make our global food systems fairer and more equal. We are all interconnected. Our climate and the ways in which we eat and trade connects us all. We must take notice of the ways we are connected to one another and unite in our efforts to make a fair and sustainable world.

A NOTE FROM OUR PARTICIPANTS

The developed photo essays presents an opportunity to showcase to the world and decision makers the links and connection between climate change and food systems from the perspective of us young people across the world. The stories seek to influence climate change action by showcasing the connectedness of our actions and how they impact lives and livelihood on a global scale. The developed photo essays aim to influence world leaders to take a proactive approach to meet the agreed on global goals to reach net zero by 2030 and

adopt approaches to protect communities and natural habitats. The photo essays seek to remind leaders and communities of the devastating effects our actions have on our survival by giving an opportunity to appreciate the impacts being experienced by farmers and consumers worldwide.

THE 2021 GLOBAL YOUTH PROGRAMME PARTICIPANTS

Aaron Koay	Malachy Tierney
Aoife Devlin	Manami Shinto
Argelia Bustillo	Nancy Kamwaza
Carol Rubi	Paul Walsh
Catherine Finn	Rachael Oluwaseyi Abiola
Chifundo Chibaka	Ricardo Ehrler
Chloe Dalton	Sara Dada
Chris Macken	Sarah Fitzgerald
Diana innocent Acio	Solomon Sebulime
Dionne Kamuzhanje	Sophie O'Callaghan
Emer Hayes	Stephen Frain
Emmanuel Dusabimana	Telma Sibanda
Hiwot Tesfaye	Thokozani Mphonde
Hannah Ryan	Trevor Kakuba
Kwangu Mwenda	Yvette Kuveya

EMMANUEL DUSABIMANA, Uganda

"Participating in the Global Youth Programme gave me a great experience. I have learned and gained experience about global citizenship, food systems, climate change, and their interconnectedness. The fundamental interconnection of these many human and natural systems poses a huge challenge to the global population. Unravelling this complex picture is key to understanding how to adapt to the unavoidable effects of climate change, and how to effectively mitigate against the most extreme changes."

SARA DADA, Ireland

"Producing this photo essay and participating in the GOAL Global Youth Programme created opportunities for not only cross-country dialogue about climate change and food systems where we could learn from each others' unique experiences and perspectives, but also the space to reflect on how these challenges affect each of us in our daily lives."



GROUP ONE



FROM PRODUCERS TO CONSUMERS

This photo essay aims to show an in-depth visualisation of how local food producers and consumers from urban and rural areas in Ireland, Honduras, and Uganda, experience the effects of climate change both in their businesses and their daily lives as well as their interconnectedness with food systems.

We have chosen to visualise this essay in four chapters of personal stories. As advocates, we believe this is the most compelling way to convey the message of our guiding statement.



CHAPTER ONE

RURAL PRODUCERS



Maria, Honduras

Maria de Jesus or “Doña Mari” as everyone in the community knows her, is an inspiring and resilient woman. Doña Mari became a widow shortly after she was married. She only has one daughter, something rare in rural communities in Honduras where the status quo for women is to have more than one child. Despite not knowing how to read and write, Doña Mari managed to raise her daughter and give her an education by selling beans, corn, carrots, and rice, which she grew herself on her land. **On September 5th, 2019, the president of Honduras, Juan Orlando Hernandez, declared a state of emergency due to drought.** The crops and the little income that Doña Mari received were affected, so she had to start doing domestic work in Tegucigalpa, the capital of Honduras. Present-day, Doña Mari continues to work on her land with the help of her daughter, her son-in-law, and her 14-year-old grandson.





Stephen, Rural Ireland

The experience of producers in rural Ireland is changing as society begins to recognise the impact of food systems on climate change. Even just one generation ago, agriculture was the bedrock of many communities and at the heart of the national economy but it is now just one of many components. The story is nevertheless one of resilience. **Farmers adapted the use of the land with a view to future-proofing their livelihoods and playing a role in the mitigation of climate change.** It is now used for forest rejuvenation and is a site for wind farms. Their ability to reinvent themselves is a testament to their potential to be agents of change.

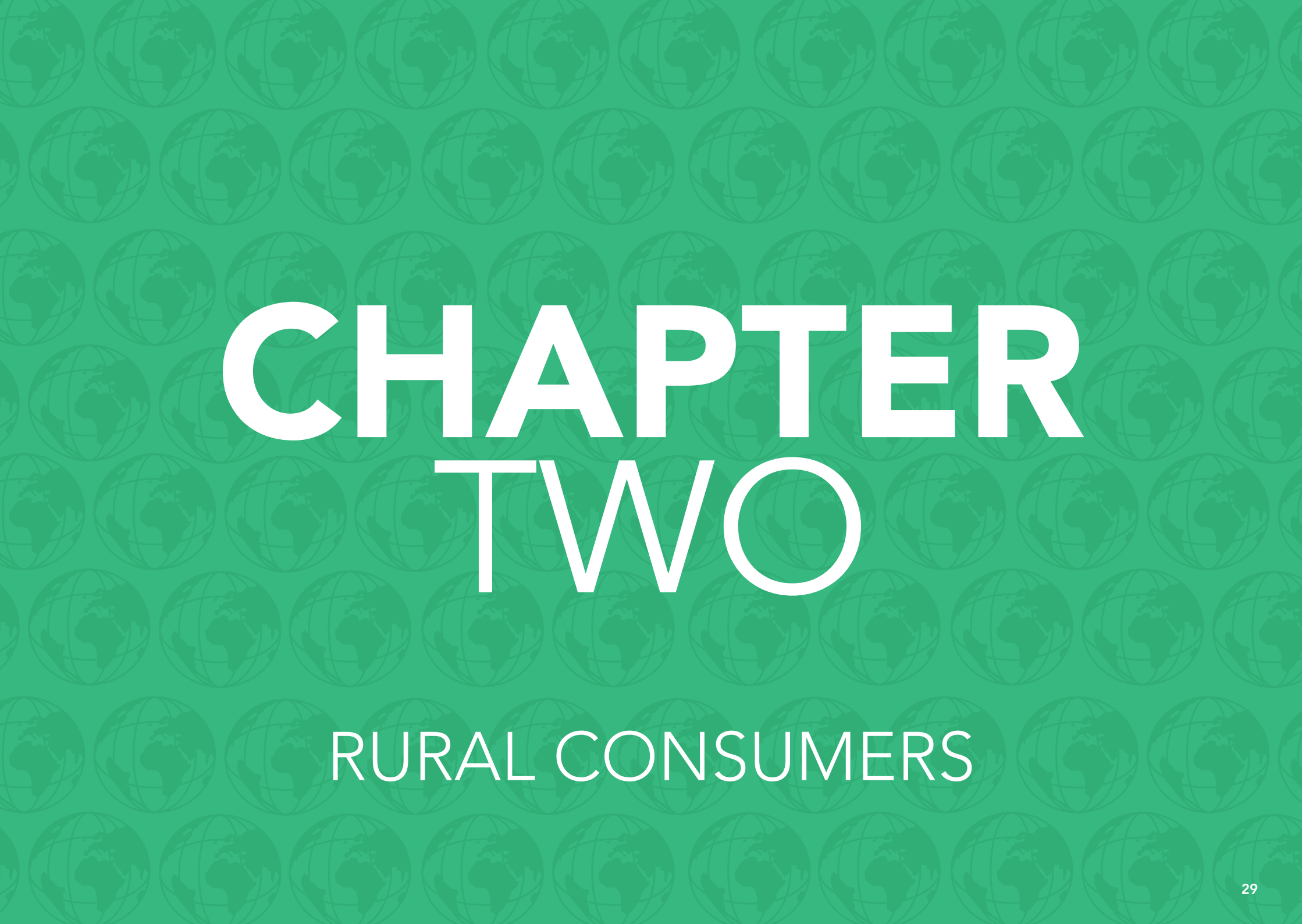




Haziel, Honduras

Haziel, 21 years old. He had to drop out of school when he was in 5th grade to work and help with household debts. Haziel does not have a stable job, he often works as a bricklayer, but most of the time he works the land. Haziel told us that the landowners he works for are not wealthy and they pay him in food for him and his family (rice, beans, potatoes). **Haziel mentions that during November of 2020 when Honduras was affected by hurricanes Eta and Iota, he, and his family had difficulty accessing food since he was unable to work** due to the constant rain and the damage to the roads. Thankfully, most of the crops were not lost.



The background of the slide is a solid green color with a repeating pattern of stylized globes. Each globe is a darker shade of green and shows the outlines of the continents and latitude/longitude lines.

CHAPTER TWO

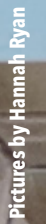
RURAL CONSUMERS



Meet the chickens, Ireland

A small eco-conscious change to provide a better alternative to the excessive environmental impact of factory farming. **These happy and healthy hens are super sustainable and consume our excess food waste.** Their waste is then contributed towards the maintenance of our vegetable garden. They support the continuation of backyard biodiversity.



[illegible]

CHAPTER THREE

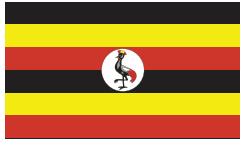
URBAN PRODUCERS



Roberto, Honduras

Roberto has worked in the farmers market in Tatumbla, Francisco Morazan for 17 years. **Due to the drought that affected Honduras in recent years, Roberto lost a good part of his crops and, since he could not find another job, had to migrate to the United States.** All the savings he had, went to pay the “coyote” (a person who smuggles people from Latin America across the US border, typically for a very high fee). Roberto worked as a builder in the US for 5 months, then he was deported. After being deported, he worked as a bricklayer, returning to work again on his land growing carrots, onions, and chili peppers. Roberto has 4 children, 3 boys and 1 girl.





Sarah, Uganda

Sarah takes great interest in business initiatives and believes that for one to grow in entrepreneurship one has to start from the smallest ventures. When asked how she started in the food business, Sarah responds **"Food is part of man, and everyone needs to have access to food and specifically healthy food hence it's a necessity"**. She buys in bulk and sells in small quantities at retail prices. She says that, due to Covid-19, there is need for excessive caution even when supplying these food items.



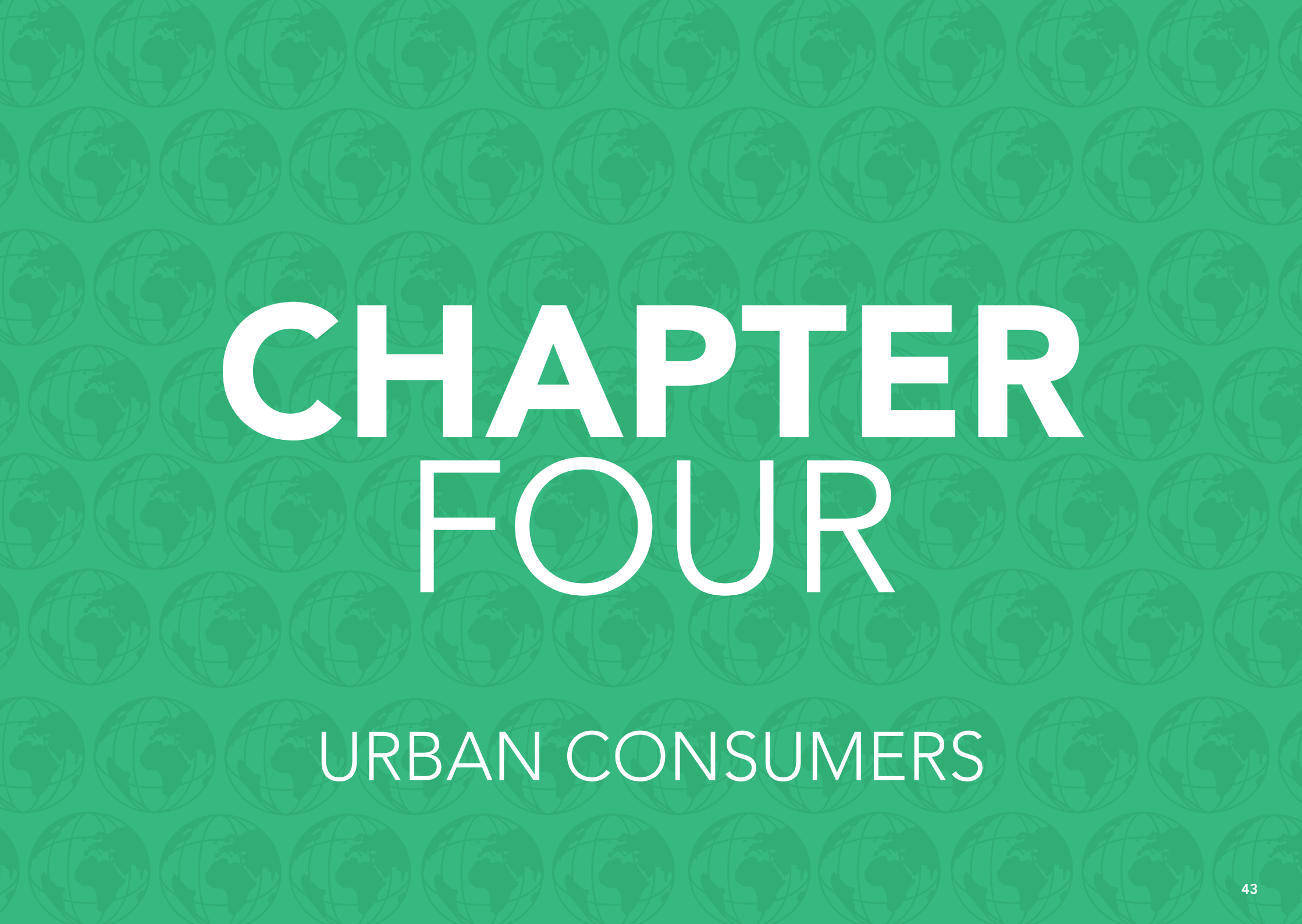
Pictures by Diana Innocent Acio



Save the Bees Campaign, Ireland

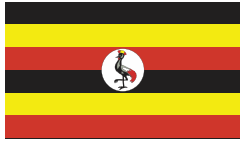
The Global loss of bumblebees has been driven by "Climate Chaos". **Bees are the hardest working creatures on the planet and connect all of us.** They are essential to our ecosystem ensuring pollination, thus maintaining biodiversity, and crucial for our food system. **The all-Ireland pollination plan 2021-2025 is in place to help save our bees.** This will benefit producers and consumers globally, in all aspects of our lives, and protect our planet.



The background of the slide is a solid green color with a repeating pattern of stylized globes. Each globe is a lighter shade of green and shows the outlines of the continents and latitude/longitude lines.

CHAPTER FOUR

URBAN CONSUMERS



Diana, Uganda

Diana lives in the peri-urban part of the country where food is transported from the rural areas to the farmers' markets in town. She says that **the prices of these food items fluctuate depending on the prevailing circumstances like the availability of a certain food item.** Moreover, another lockdown was declared in the country due to the COVID-19 pandemic, which restricted mobility in the country. Some of the food prices remained the same since the transportation of food producers was not restricted. However, many people lost their jobs which compromised families abilities to access food.



Picture by Diana Innocent Acio



Shaakya and Serena, Dublin, Ireland

Shaakya is an international student from India whereas Serena is an Irish-born Hong Konger/Malaysian. Yet, in this picture, they were enjoying Taiwanese Bubble Tea and Venezuelan Arepas in urban Dublin. This demonstrates the rich and communal yet fluid nature of food culture as well as the ease of availability of, and accessibility to international cuisines and exotic food experiences in cities such as Dublin. Upon reflection, **urban-dwelling people are privileged** to have more opportunities to accumulate cultural capital and gain cultural competency through food **when compared with people living in rural areas, particularly in low-income countries where climate change has severely impinged on food security.**



Picture by Aaron Koay



Vegan living, Dublin, Ireland

"I have to remind myself of the privilege I have as an urban dweller that I not only have convenient access to stable, secure and readily available food in supermarkets, but also the freedom to choose to consume a vegan diet. I

opt to shop at local chain supermarkets as there is a lack of access to local food producers in central urban areas. As such, there are concerns around the carbon footprints behind imported fresh non-seasonal products which can contribute to climate change. Upon reflection, there is always a tension between the ideal and the feasible but at the end of the day, we have to remember that we as consumers hold the purchasing power and we as individuals have the power to influence and elicit change on a larger scale. We as urban dwellers have to reflect on and make more conscious and wiser choices in our daily food purchases and consumption." - Aaron Koay





Alicia, Honduras

"First it was the pandemic and then it was the hurricanes. We try to make an honest living but it's hard." Alicia said as she sat on one side of the busy streets of Tegucigalpa, where she was selling her produce. "I tried to leave last year" - Alicia's first attempt at leaving the country. Alicia joined a caravan of roughly 900 people departing San Pedro Sula together but were stopped by the police and then they got separated into smaller groups. She never made it out of Honduras.



Guiding Statement

The impacts of global climate change on food systems are expected to be widespread, complex, geographically and temporally variable, and profoundly influenced by pre-existing and emerging social and economic conditions¹. But do these have the same impact on urban and rural markets? For rural areas, climate change affects the growth of crops both positively and negatively through multiple mechanisms, including changing phenology, heat stress, water stress, waterlogging, and increases or reductions in pests and diseases. Other effects of climate change on food quality during crop production include the greater risk associated with flooding, contamination of agricultural land, groundwater and surface water, heavy metals, agricultural residues, and hazardous wastes.

¹ Lobell DB, Field CB. 2007. Global scale climate–crop yield relationships and the impacts of recent warming. *Environ. Res. Lett.* 2:014002

Likewise, for urban areas, seasonal markets based on demand rather than on supply are characteristic of food chains in high-income countries; there is substantial business knowledge as well as some academic studies showing that consumer behaviour is affected by weather variables, such as temperature and sunshine. Patterns of food consumption can reasonably be expected to respond to future trends in temperature and precipitation². In addition, extreme weather events will be a more frequent determinant of food purchase and consumption, either by limiting consumers' access to food or by determining food preferences.

Moreover, the principal concern for food systems under climate change is their reduced capacity to assure food security to poor populations vulnerable to hunger and malnutrition. Climate change is likely to affect all four of the recognized components of food security: availability, access,

² Annual Review of Environment and Resources Vol. 37:195-222 (Volume publication date November 2012)

utilisation, and stability over time³. This will have different impacts on rural and urban areas of developed countries and on rural and urban areas of underdeveloped countries. Moreover, the degree of impact in different areas will vary over time⁴.

This photo essay aims to show an in-depth visualisation of how local food producers and consumers from urban and rural areas in Ireland, Honduras, Uganda and Zimbabwe experience the effects of climate change both in their businesses and their daily lives as well as their interconnectedness with food systems.

³ Ingram J. 2011. A food systems approach to researching food security and its interactions with global environmental change, Food Security Volume 3:417-431

⁴ Leng G., Hall JW. 2020 Predicting spatial and temporal variability in crop yields: an inter-comparison of machine learning, regression and process-based models. Environmental Research Letters, Volume 15, No. 4. Environ. Res. Lett. 15 044027

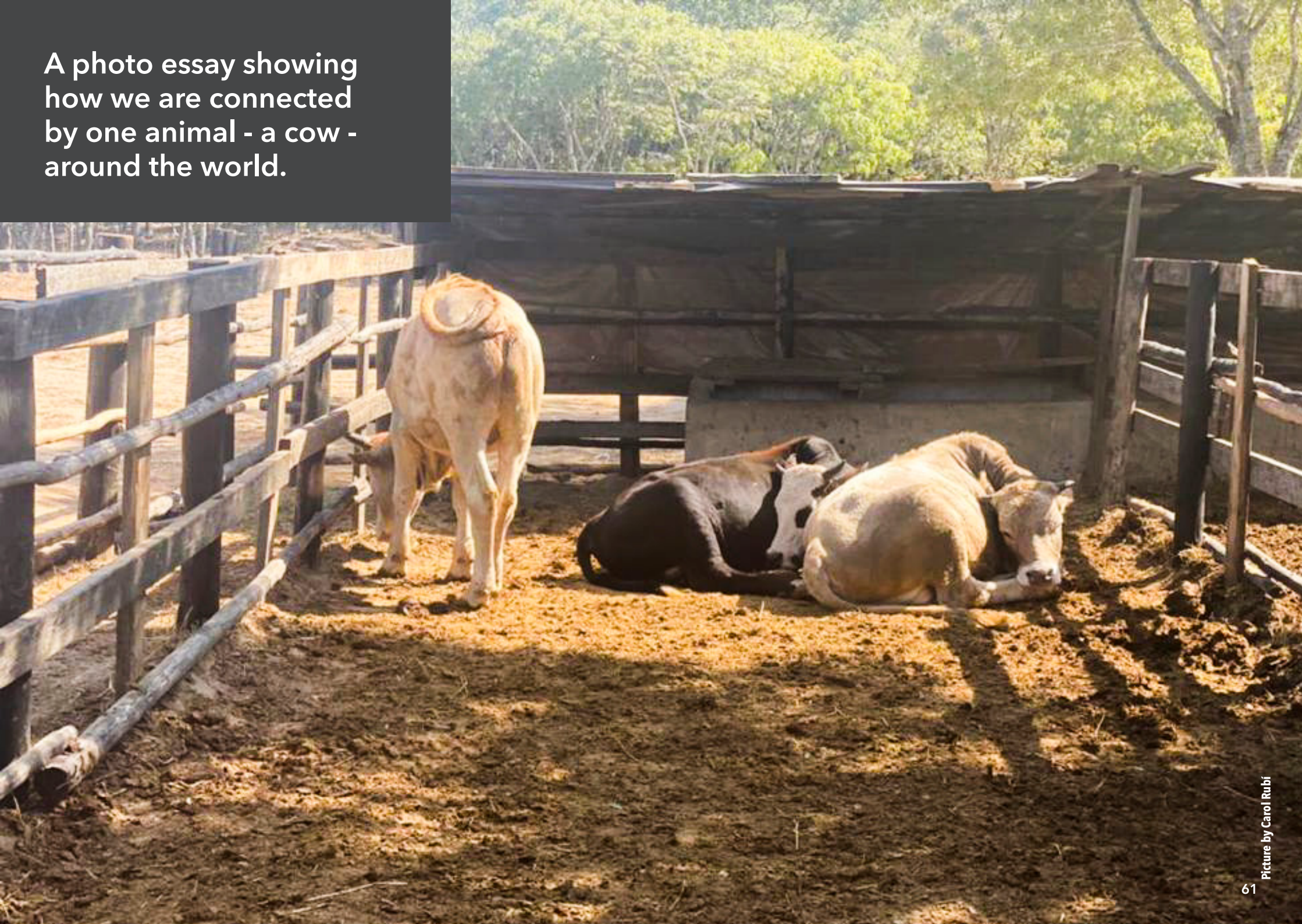
A dark gray background featuring a stylized globe with white latitude and longitude lines. The continents are represented by dark gray silhouettes.

GROUP TWO

A photograph of a brown and white cow grazing in a dry, wooded area. The cow is the central focus, with its head down eating from the ground. The background shows several trees and a dry, reddish-brown landscape. The text "COWS, PEOPLE, AND THE ENVIRONMENT" is overlaid in large, white, bold, sans-serif capital letters across the middle of the image.

COWS, PEOPLE, AND THE ENVIRONMENT

A photo essay showing
how we are connected
by one animal - a cow -
around the world.



'Our cultures are connected - in various ways - by cattle. In one part of the world, the number of cattle one owns speaks to their wealth and in another part, there is a concern of beef overproduction. The following essay will take you through the story of cattle – their diversity, contribution to the economies, rural development, social life and impact on the environment– across the world.'

In Malawi

In Malawi, as in many parts of Africa, cattle are viewed as a sign of wealth. This is because one can sell these beasts and use the proceeds to pay school fees for their children, pay for hospital bills, buy basic commodities and so on.

Chifundo says: 'When I visited the Phazi fortnightly cow market, I was amazed with the number of cows individual farmers owned. I was able to appreciate first hand why cows are revered as a sign of wealth in their respective communities and the role they play in their everyday lives. Farmers keep cattle as flexible assets that are sold to meet their needs from time to time. These include college tuition, land purchases, farm inputs purchases, or dowry payments.'



Mrs Bandawe

Mrs Bandawe has two cows to her name. She is very proud as these show her wealth. She says the two cows are her most treasured property.

Nancy says: 'I come from an area where there's more crops than animal farming. Those that keep animals only have a few. Some choose to feed their animals at home, others communally employ an individual who takes the animals out every day for feeding. Mrs Bandawe feeds her cows with grass and maize bran. She has hardly ever cleared any land to graze her few cows. Like most people, she is unaware of any impact on the environment of keeping cattle. She is only grateful to have a source of livelihood: she sells fresh milk from her cow and uses the proceeds to feed her family.'



Dionne's experience

'My father works in the livestock industry and his job mostly involves introducing different livestock rearing techniques that encourage reproduction and growth of high quality breeds. From taking these pictures I got to understand and appreciate that most farmers in Zimbabwe are willing to learn new and innovative ways to take care of their animals. They want a herd of cattle that is healthy and that will sell profitably. It is this receptive nature they have that gives me the confidence that, if communicated properly, these farmers can be taught ways that not only benefit their livestock, but also the environment around them.'



Sophie's experience

As we were doing our research, we came across an article that noted beef exports as 'the largest single component of Ireland's food export trade.'

Sophie's experience: 'I feel like this massive array of beef represents the encouragement of overconsumption of red meat. Healthier and less environmentally damaging options had much smaller sections. A lot Irish farmers know that beef is unsustainable but aren't being supported to change.'



Pictures by Sophie O'Callaghan

Meanwhile, in Malawi

Meanwhile, in Malawi the typical meat market looks like this. Just random pieces of meat placed on a bench. Most people will eat meat a few times a month, some even count the number of times a year. There is a general underconsumption of meat, mostly due to poverty, although the story may be different in urban populations.



Picture by Nancy Kamwaza

How are we connected to cows?

- They contribute to food security, nutrition, poverty alleviation, and economic growth.
- A sign of wealth in most communities – can be sold to pay for school fees, buying food and other basic commodities.
- A major source of protein.
- Cattle are used during the farming season – ox drawn ploughs.
- Used as dowry.
- Cattle contribute to soil erosion due to overgrazing.
- Cows produce greenhouse gas emissions which contribute to climate change.
- Poor handling of manure and fertilisers can degrade local water resources.

Takeaways

- Our experiences are different across the world and yet we are connected by this one animal in various ways.
- We need to find better ways to manage the production and consumption of cattle because our actions definitely affect someone else in another part of the world.
- Even if we do not have pictures to show the contrast, our experiences are different
- It was also difficult to take pictures of cattle overproduction (in Ireland) because of lack of access.

Nancy Kamwaza / Malachy Tierney / Sophia O'Callaghan / Aoife Devlin / Chifundo Chibaka / Dionne Kamuzhanje

A stylized, light green globe with latitude and longitude lines is centered in the background. The globe is semi-transparent, allowing the white text to stand out.

GROUP THREE

CLIMATE CHANGE AND GLOBAL FOOD SYSTEMS

The background image shows a wide expanse of water in the foreground, likely a bay or harbor. In the distance, an industrial skyline is visible against a sunset sky. Several tall smokestacks are prominent, with plumes of smoke or steam rising from them. The sky transitions from a deep blue at the top to a warm orange and yellow near the horizon. The overall scene suggests a connection between industrial activity and the environment.

POLLUTION



ENVIRONMENT



FOOD



GUIDING STATEMENT

This photo essay explores the impact of climate change on global food systems and shows how we feel these impacts across different countries and communities. Even though these environments may look different, we are all impacted by these global challenges and our actions have consequences beyond us.

Pollution

Across the world, there exists an abundance of diverse lifestyles and landscapes. Yet as global citizens, our daily activities and the actions of the societies in which we live have a deep impact not only on our immediate surroundings but on the wider planet. Litter, noise and CO2 emissions are spoiling the natural beauty of our world and have a devastating impact on wildlife as well as on the wellbeing of humans. The earth's air, land, and oceans are polluted through various activities - from landfills in Uganda to traffic in Zimbabwe to industrial air pollution in Ireland, we see the potentially irreversible effects of climate change in our communities every day.



Ireland Photo Credit: Sara Dada



Zimbabwe Photo Credit: Felma Sibanda



Uganda Photo Credit: Emmanuel Dusabimana

Personal Reflections

Telma Sibanda, Zimbabwe

This photo essay helped me become more aware of evidence of climate change in our societies and its impacts on communities. Most of the pictures that I took are from rural areas. There are a lot of dry rivers and dams as well as boreholes that have turned into dry holes because the water level is now too low. Due to climate change, there is low rainfall which is, in turn, resulting in severe water challenges for communities. During this Covid-19 era, communities can't even prioritise hand washing because they don't have adequate water for domestic use. Water is a necessity and communities shouldn't have to travel 26km to get water. Conversations with communities were heart-breaking because the experiences that they are going through are tough.

Climate change is, in turn, affecting food systems. Due to water shortages these communities have to get most of their food from big towns so sometimes you find empty market stalls because they have run out of vegetables to sell. People in the cities are polluting the environment more through heavy traffic, mines, etc but rural communities suffer the consequences most. In Gokwe, climate change is even leading to more salinity of water, rendering it unsuitable for domestic and agricultural purposes. Rural communities are trying to adapt but it's not an easy task and mostly they are forgotten. Even when climate change policies are being made, they are more favourable for the urban communities and leave out the ones who suffer the most.

Environment

These high levels of pollution in turn affect weather events and contribute to climate change – affecting our fields, rivers, and sources of food and water. However, the impacts of climate change arise in different ways, and often present themselves more in the areas which contribute the least to their cause. Water is an essential resource to all human life and has the power to shape our lands and the food that we eat – whether through its absence during drought, or its surplus in rising sea levels and floods. Around the world, we are experiencing the effects of climate change on our environments and food systems at various levels and timescales. Unchecked, pollution and climate change will lead to some not having enough drinking water, while others will be surrounded as sea levels rise and claim the land they currently inhabit. Yet we are connected as global citizens through these inevitable impacts, whether we are already living with climate change or have yet to experience its effects.



Zimbabwe Photo Credit: Telma Sibanda



Ireland Photo Credit: Catherine Finn



Uganda Photo Credit: Emmanuel Dusabimana

Personal Reflections

Emmanuel Dusabimana, Uganda

Participating in the Global Youth Programme gave me a great experience. I have learned and gained experience about global citizenship, food systems, climate change, and their interconnectedness. The fundamental interconnection of these many human and natural systems poses a huge challenge to global population. Unravelling this complex picture is key to understanding how to adapt to the unavoidable effects of climate change, and how to effectively mitigate against the most extreme changes. Without such a holistic understanding, efforts to maintain our food supplies or to limit climate change to a reasonable level will rely more on luck than judgement. This amazing photo essay, in which I

participated, gave me the opportunity to look at food systems and climate change from a new perspective. Initially, I was not aware of how climate change is contributing to global food challenges, especially in rural communities. While taking photos and interacting with the local community from Gulu, Uganda, I experienced how climate change has led to reductions in crop yields, increased water shortages and contributed to the prolonged droughts. From the photos and experiences shared by participants from different countries, I learnt about various factors that cause climate change, which in turn affect the global food systems. I saw how communities are dealing with the problems caused by climate change and understood clearly the role we have to play, especially young people, in curbing climate change and building resilient food systems.

Food

Like dominos falling, our actions and behaviours have subsequent consequences in our communities and around the globe. For example, because water is a basic necessity, droughts, storms, and a lack of drinking water will all impact our food systems. The ways in which we produce and access food demonstrate that our lives are deeply connected to each other and to the planet. The marketplace gives an insight into this relationship – imported produce in Ireland, locally sourced food in Uganda, and empty stalls in Zimbabwe. While some communities will be unable to produce enough food or may face empty shelves at the market, others may continue to benefit from imported produce. Our food systems are deeply linked to and dependent on human activity and climate change. Our food resources can either suffer at the hand of our changing world, or become a catalyst for a more sustainable future. The collective effort of our global community determines the direction we follow.



Ireland Photo Credit: Catherine Finn



Uganda Photo Credit: Emmanuel Dusabimana



Zimbabwe Photo Credit: Telma Sibanda

Personal Reflections

Catherine Finn, Ireland

Through the creation of this photo essay, I came to learn how food deeply connects people to nature, to their environment and to each other. Having gained insight into the experiences of my fellow participants, my own perception of the relationship between food, humans and the earth has changed. Not only do I view the food on my plate in a new light, but I have become more aware of the issues of climate change in my everyday life and surroundings. By turning the lens onto my local area, I discovered scenes and stories that both related to and diverged from those told by other participants and experienced in other countries. Ireland may not yet feel the full effects of climate change on its landscape, food and communities, but our daily actions which impact on the

global experience of climate change are clearly visible - from excessively packaged and imported produce that fills our supermarkets to polluted air, water and natural resources. While exploring Dublin's urban landscape, I witnessed how local food systems are changing in response to social and environmental developments. The photo essay took me to a boarded-up market space which had been overtaken by wildflowers, but it also led me to new markets where producers and shopkeepers are inspiring local communities to connect to and access food in more sustainable ways. This project has enabled me to reflect on how my interactions with food, nature and society connect to the global community. While climate change poses threats to lives and communities across the world, there still remains the opportunity to draw on our interconnected relationships to food and reimagine a more sustainable food system to lie at the heart of our environments, societies and communities.

Sara Dada, Ireland

Producing this photo essay and participating in the GOAL Global Youth Programme created opportunities for not only cross-country dialogue about climate change and food systems where we could learn from each other's unique experiences and perspectives, but also the space to reflect on how these challenges affect each of us in our daily lives. Some of these impacts appear similarly - from empty market stalls in Zimbabwe to bare shelves at Tesco in Ballsbridge - while others are quite different. As I walked around Dublin reflecting on our group's conversations and experiences, I began noticing more examples of that interconnectedness and how actions in my own town or country can eventually have a domino effect on friends on another continent.

Paul Walsh, Ireland

During the course of this programme and during the construction of the photo essay with the team, I have gained a newfound appreciation for the connections between the seemingly unconnected in our world. Actions taken in one country have both an indirect and a direct impact on the way people live their lives in other parts of the world. Furthermore, I learned that it is primarily the responsibility of those in countries who have already reaped the rewards of fossil fuels, to lead the way in the development of new means of fuel that will be cost effective and help bridge the global wealth divide.

GROUP FOUR



FOOD SYSTEMS AND THE LAND

**EVERYTHING
HAS A BEGINNING
AND AN END,
HOW DOES
FOOD REACH
OUR TABLE?**



INPUTS

Land

Farmers' most precious asset is their land. They are amongst the first to bear the brunt of droughts and floods. Their livelihoods are in imminent danger of being lost to land degradation which in turn threatens the food and nutrition security of billions of people around the world. It is in the best interest of every single farmer around the world to protect the land on which their lives depend. As we move through this photo essay, we will explore food systems in Ireland, Malawi, Uganda and Honduras, and the land serves as a starting point for all of them. Each country prioritises different conditions, depending on what is being cultivated but around the world, seasons are becoming increasingly unpredictable due to a rapidly changing climate: hotter, colder, wetter, drier.



Society places value on the commercial dairy products that come from farms, and the same society vilifies the methane-emitting cows, but little attention is paid to the extraordinary lengths that farmers go to safeguard the earth that feeds us: the carbon sequestered, the trees planted, the biodiversity housed. There is undoubtedly room for improvement and changes are being made in the right direction but, rather than staging a boycott of animal-source products and vilifying small-scale family farmers, perhaps we consumers, can begin to appreciate the role farmers play as custodians of the environment and work together with them to move towards a more sustainable food system. After all, they are at the forefront of the fight against climate change.



Seeds

SEEDLINGS

The beginning of life, the start of one of the most crucial processes in human history, "Farming". As we have all done in our lives (yes, I am talking about that science fair project in school where we had to grow our own bean plant), growing plants is common knowledge for everyone. We see it in our classes (Biology) and even in the news. What we do not know is that this can change depending on the crop and the climate it grows in. For example, in Honduras coffee is mostly grown from seedlings, which is a different process since certain specialised companies are in charge of growing these seedlings. These must be planted in cold and high pressure areas, such as mountains, where conditions offer the best environment for these plants to grow.



MORE SEEDS!

Another example is corn, where the same cereal grain we eat is the same seed we plant. These are grown in warmer climates and must be sown in a properly prepared soil so that the plants grow easily and tall. Climate, soil characteristics, altitudes, water amounts, and others - all these factors must be taken into consideration before growing any crop.



Photograph: Solomon Sebulime

Manure

Throughout history, farmers who raise livestock have used manure as a fertiliser, soil amendment and an energy source. Manure is a rich source of nutrients supporting plant growth and is best applied after it has been composted. Manure increases crop yield and improves land quality.



Photograph: Solomon Sebulime

Climate and Landscapes

HONDURAS

In Honduras agriculture as a whole is one of the bases of the country's economy. A tropical climate, calls for some tropical crops such as corn, pineapple, radish, lettuce, cabbage, "pataste" or cho cho pear, and many others. Nevertheless, you can also find crops such as citrous (orange, lemon, tangerines), guava, and coffee (which is one of its biggest income producers). Due to the steep terrains and high altitudes, the farmers must seek their way through these hills and implement different and creative ideas to fulfil their roles as one of the most important groups in the country. Irrigation through gravity, conventional ploughing procedures (using oxen and manual work) and maintaining the freshness and organic state of all its products.



MALAWI

Malawi's mainstay is agriculture. The small town of Mulanje houses one of the largest tea plantation sites at the foot of Mulanje mountain. Tea contributes greatly to Malawi's economy and the tea industry turned about \$11 million in profits in 2016 alone. Tea estates in Malawi are a source of employment with about 7500 small scale farmers working on all of the estates in Malawi. The tea estates also serve as tourist attractions as they are known for their beautiful and awe inspiring views.

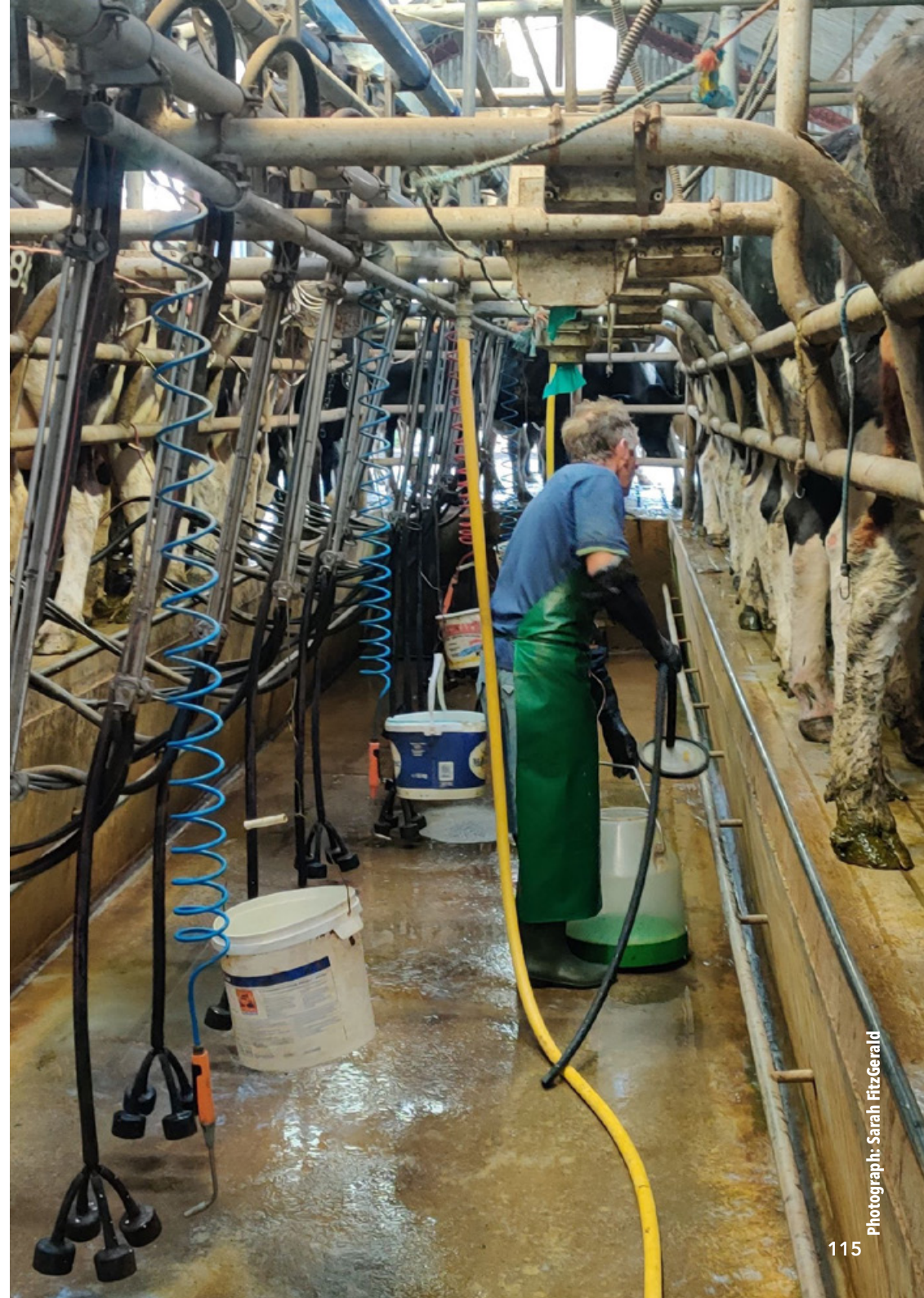


Photograph: Kwangu Mwenda

PROCESSES

Dairy Process

In Ireland farming is predominantly a family activity, with around 18,000 dairy farmers across the country milking approximately 1.55 million cows. Despite our small size, Ireland is the world's 10th largest dairy exporter with our iconic golden-wrapped blocks of butter travelling far and wide. But what is it that makes us stand out on the world stage? The green fields that opened this photo essay are grazed by our dairy herd approximately 240 days a year, and make up about 95% of Irish cows' diets. The milk from grass-fed cows is richer and creamier than that from cows raised on concentrates, and this gives Irish butter its famous golden glow. Because all these farmers are reliant on healthy grassland, it is in their best interest to protect the climate and ecosystems that surround them.



Some processes for Crops

IRRIGATION

Malawi relies heavily on rainfed agriculture. Due to the seasonality of rain, most farmers are beginning to turn away from rainfed agriculture to irrigation farming. Irrigation is applying water to crops artificially. On this small farm, water comes from the nearby Ludzi river and is pumped to the crops. The pumps are fuel driven making it easier for crops to be watered.



HARVESTING

Maize is one of the most important cereal crops in Uganda. In particular, smallholder farmers rely on it for food and as a cash crop. Maize is grown on well drained, well aerated, deep, warm, loam soils. It is well adapted to warm conditions with optimum temperature of 30 -34 degrees celsius. Temperatures below 10 degrees celsius and above 40 degrees celsius result in poor growth and death of the maize plant. Maize may be harvested dry or green. To harvest maize green and fresh, farmers have to wait for the silk to turn brown. To harvest it dry, corn is left on the field until the silk, the husk and the leaves are completely dry.



DRYING

Newly harvested maize is dried to safe moisture levels in order to maintain quality and marketability. Farmers in Uganda dry their maize safely on clean tarpaulins under the sun. This helps to avoid aflatoxins that would cause liver cancer when consumed in large quantities by humans.



Delivery and Supply Chain

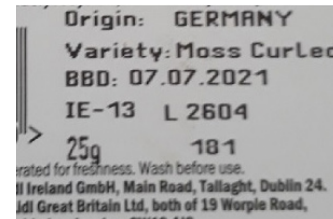
Food delivery is one of the processes that most people often find insignificant when compared to all other food processes. Nevertheless, it is essential to the supply of food. It involves receiving the products from the primary processes (farming, milking, butchering, etc) and handling them in a way that is safe, nutritious and welcoming to anyone who buys it. These are then delivered through these delivery trucks, which serve different areas through the country. That way, our supermarkets, grocery stores, "pulperias", or any convenience store will always have the supplies needed to fulfil our food necessities.



Food Traceability, Quality Assurance, Origins and Geographical Indications

Food traceability is the ability to follow the movement of a food product and its ingredients through all steps in the supply chain. It involves documenting and linking the production, processing, and distribution chain of food products and ingredients. Quality assurance relates to measures to ensure food safety and enhance quality measurements. These stickers allow the consumers to know where their food is coming from and whether it is safe for consumption. Certain food items also have a geographical indication label which indicates that a product has a specific geographical origin and possesses qualities, reputation or characteristics that are essentially attributable to that place

of origin. Geographical indications protect special products against misuse or imitation of the registered name and guarantee to consumers the true origin of the product.



OUTPUT

Home-grown Food

The COVID-19 pandemic forced us to change the way we live, work, travel, and socialise. Limitations placed on movement and ensuing trade restrictions sparked debate about the untenable length of our supply chains, and short, more local chains emerged as the most resilient. Time, which would previously have been spent commuting to and from work, meeting friends, or entertaining children, was now put to alternative uses. Many people in Ireland, both rural and urban, took up gardening, even in the smallest of spaces like balconies, windowsills and raised beds. For many, it was the first time they engaged in food production, albeit at a microscale. Experiencing the tender loving care required throughout the process, from planting seeds, watering, weeding, and harvesting at the

right time, forced us to reflect upon the effort that goes into food production, and to appreciate the labour-intensive nature of the whole system. A more conscious engagement with the food system has compelled us to savour every last bite.



Photograph: Sarah Fitzgerald

Supermarket Food

It's easy to take the food we put in our shopping baskets for granted.

- How is it possible for produce to be sold for such a low cost when it was grown on the other side of the world?
- Do we give enough thought to how we buy and prepare our meals?



Final Products

ORGANIC PRODUCTS

Ricardo says: 'Imagine, finding yourself on a cloudy day, cold weather, looking into the sky and wondering, "How could this day get better". Well, add a fresh organic cup of coffee and your life gets better. Covid-19 has taught me the importance of treating yourself and reflecting on life from time to time. In Honduras it is a well known fact that the coffee grown and produced is a delicacy the whole world should taste and enjoy. The effort, passion and dedication put into this process can be felt in every sip and one begins to learn the true value in the small things in life, such as a cup of coffee.'



DAIRY PRODUCTS

85% of Ireland’s dairy produce is exported and appears on supermarket shelves around the world in the form of butter, cheese and skimmed and whole milk powders. In Ireland, alongside an abundance of fresh milk there is an ever-growing range of Irish farmhouse cheese. Artisan cheesemakers use the high-quality milk to create equally high-quality farmhouse cheeses on a small-scale, each unique in flavour and telling an individual story about producers and places.



FOOD ON YOUR TABLE

Many of us go and buy fresh groceries from the shops and never think about where our food actually comes from. The simple meal on your table may have come from thousands of miles away, and gone through many different processes. The land, climate, people, and the entire world is involved in getting that perfect meal to our table. It's about time we started thinking beyond the supermarket and be more conscious of our food and the entire process that is involved.



WASTE

Waste is the most obvious output in the food cycle. Instead of throwing it away, it can be reused, recycled or repurposed. For example, used coffee grounds and egg shells are useful in gardening as natural fertilisers and pest repellents! They can also be used for beauty purposes such as face scrubs or face masks. They're natural, Earth-friendly and free!



The background is a solid red color. Overlaid on this is a faint, light red graphic of a globe with latitude and longitude lines. In the center of the globe, there is a darker red silhouette of the European continent.

GROUP FIVE



INTER- CONNECTEDNESS

GUIDING STATEMENT

Globally, climate change and food systems are interconnected in ways we often forget. It's useful for us to consider the people behind this 'connectedness'. From farmers in Honduras, local fishermen in Africa, and even home-growers here in Ireland. Take a moment to see how we, as humans from across our different homes, are being affected by some of the daily choices we make in our world. Our hope is that you'll see how interconnected we all are through our food systems. #connected2

Honduras

In Honduras, a country in Central America, agriculture is one of the most important sectors and the top source of income for the poor as it provides a tremendous amount of employment opportunities. It also heavily contributes to economic growth especially because Honduras' main exports come from agriculture.



Picture by: Argelia Bustillo

Malawi

If we visit Malawi in Africa, we can see the process that goes into fishing over there. You can observe locals dragging in their lake net. It was cast in the early hours of the morning and is now being dragged back, in the late afternoon. They now separate the fish into different kinds, clean it and set it out to dry or they take them to the marketplace to be sold.



Photograph: Thokozani Mphonde

Livestock production

Livestock production is one of the important agriculture activities in Honduras and it plays a huge role in the food security of many households: for example when a family has a cow, they are able to consume some of the milk and sell the excess to earn an income. More income can be earned later when the cow is sold or when it provides calves and they are sold. Livestock production also generates many jobs for people in Honduras right from the farm through the production chain where value can be added. The cattle are mainly used for beef production but other products such as milk and hides for leather are also obtained. Yet many unimaginable disruptions to local food systems occur, for instance hurricanes

and drought. For some, if they have both arable land and farming knowledge, this means hand-to-mouth survival. For many, where this isn't possible, it means migration.



Picture by: Argelia Bustillo

Fragility

But behind these beautiful photos is an unfortunate state of fragility. Fragility in the marketplace, in acquiring produce, and in selling their catch for profit. On top of this, the nets used may get lost at sea - polluting the oceans even further and lowering the local odds of larger catches in the future. As for all of us on this planet, there has been a lack of development in the sustainable fishing sector - from self-decomposing nets to policies which aid sustainability - where the fishermen, sometimes unknowingly but also sometimes knowingly, contribute to these processes that are destructive to the environment.



Photograph: Thokozani Mphonde

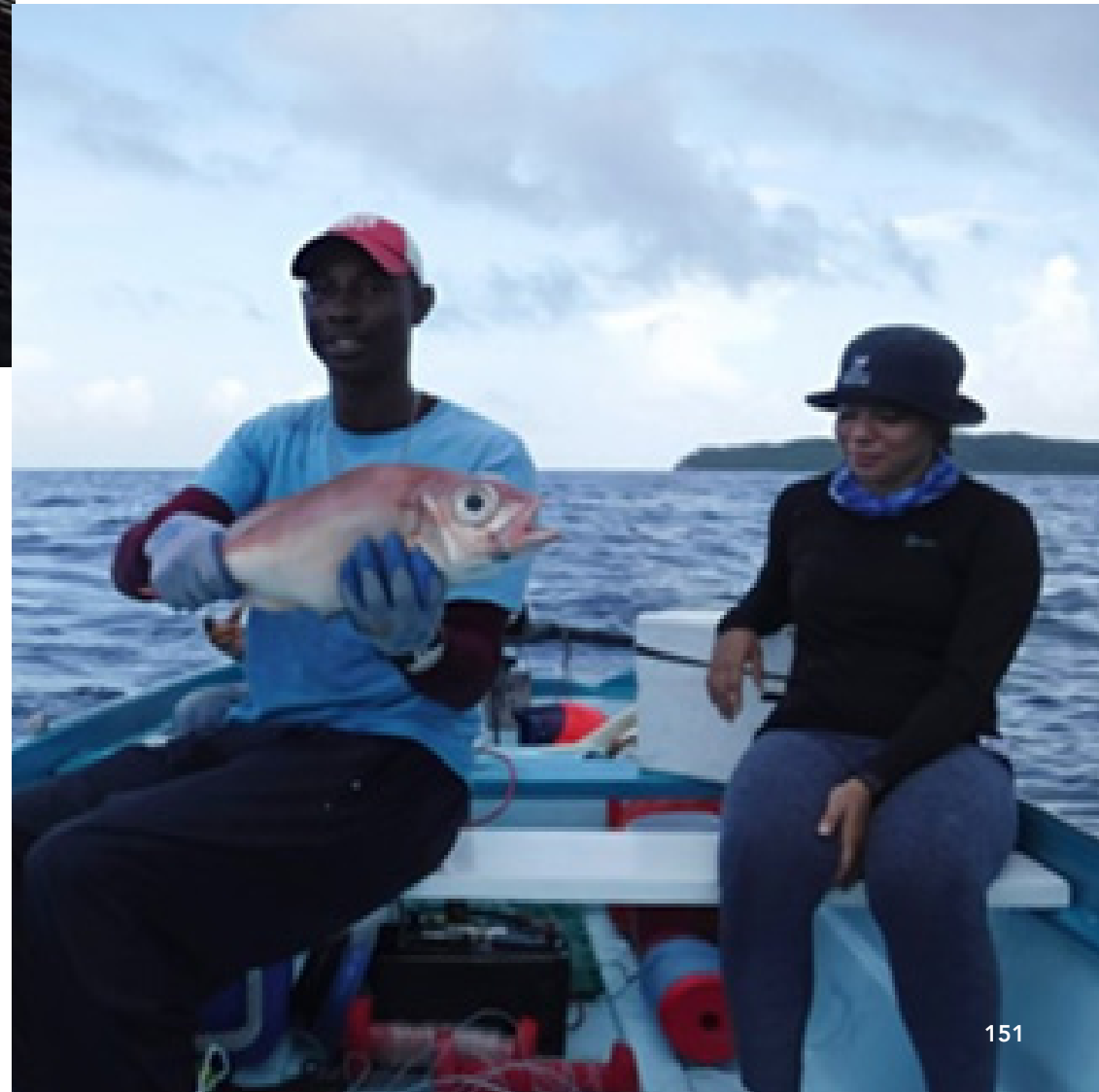
You see, it's not easy to think about the stages our food goes through. Usually we take it home from the supermarket, where we prepare it and consume it - more often than not, leaving some to be tossed away. Our aim is that by viewing some of these stories we may begin connecting dots from across our shared environment.



Photograph: Thokozani Mphonde

plants, to regions at higher altitudes or latitudes, in search of the temperatures to which they are more accustomed. This makes it more difficult for fishermen to catch their products and provide income.

In Malawi, artisanal fishing is the livelihood of many communities, providing food and generating income for families. However, overfishing and climate change have caused the displacement and/or reduction of fish populations in the sea. Rising temperatures associated with global warming are causing earlier springs and the relocation of many species, including



Trevor says: 'I have seen several people starving, struggling to find food. Worsened during COVID, during both partial and full lockdowns. People could barely make it while working, now without being able to work the situation is exacerbated. At the same time, it's been so dry of late and people's crops have been drying up. Well, the people whose crops are drying up are actually the poor who rent idle land owned by the wealthy so that they can grow something for themselves and perhaps sell the remainder, so it's tough for them. Without rain, our hands are essentially tied.'

The effects of climate change have affected the way we plant and harvest in several countries, such as Malawi and Honduras. Over the past 4 years we were either faced with very heavy rains that caused floods or droughts that prevented people from planting and harvesting. Hence the population is faced with hunger or unable to sell their maize to assist with their families.

On top of this, a lack of fair trade in many places forces workers into competition with one another to provide the best goods at the lowest price.

It has now become imperative that the burden of care falls on us as a global community to rectify the damage we have done. Small changes today can have a major impact tomorrow.



Focus on what we can do

There are plenty of initiatives supporting these values across our world. Let's take a look at one in Ireland, where many towns are offering allotments and community gardens, providing a foundation for community growth.



Here in Bundoran, Donegal, a group of 24 local people meet every Thursday morning from 10am to 12pm. They begin in February and finish at the end of October each year. They grow their own food in 20 growing beds allocated to them, bringing home their own produce. The social aspect of this group adds a richness to the experience.

The second aspect of the Bundoran project offers over 30 allotments to local families to grow their own food. These families come and go in their own time which suits some people better. There's been a sharp increase in interest in these allotments since Covid - especially among young couples. It is a very welcome promising trend in the light of the urgency of climate change.

The Bundoran community garden believes in supporting agricultural practises that are both ethical and globally responsible, as we all are seeing first-hand the effects of climate change around the world.

The project also leaves a large patch of wildflowers each year. It's cut once yearly, after the end of July, to ensure that the seeds can return to the soil thus trying to protect the original natural biodiversity.

Many of us are completely unaware of the complex processes that bring food from seed to our table, and the effect that our food decisions are having globally on our shared environment. One painful fact is those most contributing to the climate's negative effects on agriculture are least affected by their actions.

If you visit this centre in Bundoran, you may be offered a challenge. A challenge which encourages sustainable food choices and shows how our daily food decisions affect this interconnectedness. After finishing this challenge, you may be left with a feeling that you in fact have a lot more power than you realised.

Reflections from Ireland: Emer, 22.

'How can we purchase a pineapple for 89 cents? It really makes you think about the potential for exploitation and the difficulties in regulation of our global food system. In Ireland, we have great access to high quality foods which are so regularly taken for granted. It is not until we cast an eye onto the other corners of the world that we can truly comprehend the unequal accessibility to food and fair farming. Something we are often comfortable to shy away from.'



'My mother, over lockdown, started growing her own vegetables - which I helped with. I now know the sheer level of work that goes into maintaining one tomato plant, which was previously incomprehensible to me. Growing up in Dublin, there is little exposure to farming processes that are required for food to reach our shelves. It's easy to turn a blind eye to injustices of exploitative farming. Unfortunately, media outlets such as Instagram and Netflix are the most likely source of information that young people living in Western cities will be exposed to.'

The detachment in the food production chain has assisted us in our ignorance - ignoring fundamental issues in regards to our fair trade flippancy. But we need not feel helpless nor ignore this reality. We can take conscious steps to act in ways that support ethical and sustainable practises. If not me, then who? If not now, when?



In closing,

You can now see how climate change and food systems are interconnected - in ways that we forget or have previously ignored. So then, what now? Perhaps we may close this photo essay with a quote from Martin Luther King Jr., from his essay on The Purpose of Education, in which he states:

“We must remember, intelligence is not enough. Intelligence plus character—that is the goal of true education.”⁵

If we consider this essay a collection of intelligence from across the world shared to you now as a form of education, the question then

⁵ King, Martin Luther, Jr. 1947. ‘The Purpose of Education’, *The Papers of Martin Luther King, Jr. Volume I: Called to Serve, January 1929-June 1951*, Clayborne Carson, Ralph Luker, and Penny A. Russell, eds. University of California Press at Berkeley and Los Angeles 1992

ignore what is now in plain sight? Might I consider what small, but powerful, steps I can take from reading this - giving me greater power and responsibility for the choices I make.

None of us need to expect ourselves to make huge changes overnight - that’s not why we’ve brought this story together. So let’s start with an example - buying a bottled drink. We might ask, where will my bottle end up, or what’s the impact of my actions on those who are most affected by them? How about when having the choice of Fairtrade over a product appearing slightly cheaper. Will we ask, how will my choice influence states of conflict within the producing communities? You see, these small decisions for good turn into habits, and here is where our power is. These habits damage or empower us sharing this planet.

You have far more power in this problem than realised, as when these decisions arise, you have the power to make a different choice. To choose a better, cleaner, shared world, for those most affected - the families and communities.

Again, no one is expecting huge changes overnight. Yet if you take just 5 steps toward this future, and ask 3 friends to join you on this journey, along with The GOAL community, we can step together toward this brighter and fairer future.

Start your journey toward 5 choices to improve your global fairness and sustainability! #mynewGOAL #connected2

ACTIVITY:

Make your own photo essays!

If you feel inspired by the photo essays in this booklet, why not create your own! This can be done individually, or as a group.

INDIVIDUAL EXERCISE:

First think of a topic that connects you to the rest of the world. In our photo essays we drew on food systems and climate change as topics that connect us. However, you can choose any topic you would like to explore.

Potential topics that connect us to the wider world:

- Arts, music and dance
- Food and water
- Family and friends
- Work and education
- Animals and nature

Once you have chosen your topic, think about why this topic is important to you and how it connects you to the wider world.

Now that you have reflected on this, it's time to take some photos!

Using your phone or camera take photos of anything that inspires you and connects to your topic of choice. Once you have taken 3-5 photos that you feel connect to your topic your photo essay is complete!

We are all connected to something and someone bigger than ourselves. Share and tag your photo essays on social media using #Connected2 #NextGen and join the GOAL Global Citizen community.

GROUP EXERCISE:

First think of a topic that connects you to the rest of the world. In our photo essays we drew on food systems and climate change as topics that connect us. However, you can choose any topic you would like to explore.

Potential topics that connect us to the wider world:

- Arts, music and dance
- Food and water
- Family and friends
- Work and education
- Animals and nature

Once your group has chosen a topic, think about why this topic is important to you and how it connects you to the wider world.

When you have reflected on this, together write a short guiding statement detailing your choice of topic.

For example: I have chosen Music as the topic that is important to me and connects me to the world. I love listening to traditional Irish music

and attending concerts. Music connects me to people from all over the world because I believe it is a universal language. I enjoy listening to traditional music from all over the world and noticing the similarities and differences in the sounds.

Now that your topic and guiding statement are decided, it's time to take some photos! Using a phone or camera take photos of anything that inspires you and connects to your guiding statement. Once you have taken 5 photos that you as a group feel communicate your guiding statement, your photo essay is almost complete.

The final step is to come up with descriptions of your groups photos and explain how they connect to each other and the greater world. We are all connected to something and someone bigger than ourselves. Share and tag your photo essays on social media using #Connected2 #NextGen and join the GOAL Global Citizen community.

REFERENCES

- ¹ Lobell DB, Field CB. 2007. Global scale climate–crop yield relationships and the impacts of recent warming. *Environ. Res. Lett.* 2:014002
- ² Annual Review of Environment and Resources Vol. 37:195-222 (Volume publication date November 2012)
- ³ Ingram J. 2011. A food systems approach to researching food security and its interactions with global environmental change, *Food Security* Volume 3:417–431
- ⁴ Leng G., Hall JW. 2020 Predicting spatial and temporal variability in crop yields: an inter-comparison of machine learning, regression and process-based models. *Environmental Research Letters*, Volume 15, No. 4. *Environ. Res. Lett.* 15 044027
- ⁵ King, Martin Luther, Jr. 1947. 'The Purpose of Education', *The Papers of Martin Luther King, Jr. Volume I: Called to Serve, January 1929-June 1951*, Clayborne Carson, Ralph Luker, and Penny A. Russell, eds. University of California Press at Berkeley and Los Angeles 1992



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