



Map Your Meal

Competition for the Development of Short Animations

Background Information

I. Overview

We live in an ever more interdependent and globalized world. This includes our increased access to technology and our increased connectivity, our collective impact on the planet and its resources that we all share, our increasingly interdependent trade agreements, global flows of migration, as well as our food system. Any stroll through a local supermarket can reveal the global dimension of our food products. Not only do our supermarkets stock a large amount of food products that originate from other parts of the world, but the industrialization of our food system has led to more and more food products being processed in one country, its ingredients sourced from yet again other countries, and the final products the shipped to their final selling point. But what do we as consumers, as citizens, know about the origins of our food? What do we know about the impact our food product has had on the environment – either through its production or transport – and what do we know about the impact our food has on the people involved in the production process and its supply chain?

Food systems first came into existence with the domestication of animals and the beginning of agriculture and have evolved dramatically over the centuries. Being able to produce a surplus in food allowed for the storage and trade in food products. It also demanded systems of governance over the existing food resources. Control over food and natural resources (water, land, seeds) has become a factor of political influence and power early on. Increased urbanization demanded more complex food systems. Over the 20th century, food production became increasingly mechanized, increased and larger-scale production meant lower prices. The development of chemical fertilizers, pesticides and herbicides has contributed to the ever-increasing intensification of agriculture. Control over our food system has shifted more and more into the hands of a few large multi-national corporations that own production companies, fertilizers, herbicides, pesticides as well as royalties on genetically modified seeds.

Despite the increasing intensification of food production, and despite the fact that food has never been as cheap and as easily available as in today's world, 790 million people still lack access to adequate and nutritious food. Globally, one in four children is stunted in growth due to food shortages. As the Report of the Secretary-General of the UN "Progress towards the Sustainable Development Goals" points out, ending hunger and malnutrition heavily relies on sustainable agriculture and sustainable food production systems.



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II. Greenness and Fairness

In order to facilitate the process of exploring our food and its impact on people and planet, the Map Your Meal team decided to look into the two major categories of Greenness and Fairness. Each category includes a comprehensive set of thematic aspects that we want to investigate and that we believe are crucial in assessing the impact of our food.

II.1 Greenness

The idea of "being green" is now a very popular but at the same time confusing concept. To some it may mean the type of food growing and production that doesn't endanger biodiversity, or that is climate friendly and carbon neutral. Others take on the topic may mean it is sustainable as it includes cultural, social and economic factors that are created by humans with long term perspective. We decided to take a widest view possible given the available data. So green food for us means environmentally friendly, sustainable and healthy for people and planet. Therefore, we are looking at what we take out from the environment in order to produce an item of food (i.e. the use of natural resources using the example of water footprint) and things we put in back to it (GMO and pesticides; carbon emissions, waste) as well as the general impact on biodiversity with 'palm oil use' and 'fishing' indicators.

Water Footprint

As Friends of the Earth report says: 'Natural resources, including materials, water, energy and fertile land, are the basis for our life on Earth. However, humanity's rapidly growing consumption of these resources is causing severe damage' (<https://www.foe.co.uk/sites/default/files/downloads/overconsumption.pdf>).

Our climate is changing; freshwater reserves, fish stocks and forests are shrinking; fertile land is being destroyed and species are becoming extinct, people are pushed off their land or forced to compromise the environment in order to survive here and now. However as the authors of the report say that 'if we want to continue to thrive on this planet, our lifestyles will need to become more sustainable, so that we are able to protect our natural resource base and the fragile eco-systems on our planet'.

We need fresh water to sustain life, it is also one of the resources used to grow and process our food. In fact, agriculture is the human activity that consumes the largest amount of fresh water. Therefore, in order to understand how our production and consumption choices are affecting natural resources we decided to choose the use of water and The Water Footprint, created in 2002 by Arjen Hoekstra. The Water Footprint is a concept that is part of the family of environmental footprints that help us see and measure the relation between water use and human consumption. The water footprint of a product 'lets us know how much of our limited water resources that product has claimed and whether it could be made more efficiently' <http://waterfootprint.org/en/water-footprint/>.



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Use of GMO

Genetically modified organisms (GMOs) can be defined as organisms (i.e. plants, animals or microorganisms) in which the genetic material (DNA) has been altered in a way that does not occur naturally by reproducing and/or natural recombination. It allows selected individual genes to be transferred from one organism into another, also between non-related species (http://www.who.int/foodsafety/areas_work/food-technology/faq-genetically-modified-food/en/).

There is, especially in Europe, a lot of concern and opposition to the use of GM food, connected to alleged impacts on human health: (gene transfer in human cells or bacteria in the human body, impact of GM related herbicide Glyphosate on human health), environment: (migration of genes from GM plants into conventional crops or related species in the wild called outcrossing, intense use of fertilizers and/or pesticides and "Terminator Seeds" associated with GM crops which results in biodiversity loss), and socioeconomic issues: GMOs are patented under intellectual property rights which means that the ownership of agricultural genetic resources shifts from the public domain to the private sector, there are also doubts whether there is enough public scrutiny over the impacts of GMOs (<http://www.genewatch.org/sub-396416>).

Processing

In the context of the Map Your Meal project, we understand processing as the treatment of crops with agricultural pesticides and food with food processing chemicals. According to the European Food Safety Authority definition pesticides are 'Plant protection products (...) that are mainly used to keep crops healthy and prevent them from being destroyed by disease and infestation. They include herbicides, fungicides, insecticides, acaricides, plant growth regulators and repellents' (<http://www.efsa.europa.eu/en/topics/topic/pesticides>).

Released in the open and especially if improperly used, pesticides could bring considerable damage to human health, natural resources (air, soil, water) and wildlife (the destruction of beneficial organisms such as pollinators and pest predators and other insects that are an important food source for birds and other wildlife). By processed foods we mean foods that have been compromised by the addition of hormones, artificial additives. Using chemicals in food products to make them look better or last longer is another common feature of the processing stage. The impact of such chemicals on the human body and the environment are being increasingly debated. In the European Union (EU) all food additives are identified by an 'E' number. Food additives are always included in the ingredient lists of foods in which they are used. Product labels must identify both the function of the additive in the finished food (e.g. colour, preservative) and the specific substance used either by referring to the appropriate E number or its name (e.g. E 415 or Xanthan gum). The most common additives to appear on food labels are antioxidants (to prevent deterioration caused by oxidation), colours, emulsifiers, stabilisers, gelling agents and thickeners, preservatives and sweeteners.

Transportation

The free and open market within and outside the EU allows us to enjoy bigger variety of foods, increases its availability in case a country is unable to produce enough for its people. It allows farmers in the Global South to sell their produce and



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get extra income (you will find more about the conditions of such trade in the Fairness theme). This means that food such as garlic or potatoes travel between continents even when they are available locally. Here we try to bring to attention the global interdependencies as manifested by food production and distribution in a globalized economy. We look at the issue of transportation not only from the food miles angle as we are fully aware that smaller travel distance of food doesn't necessarily translate directly into smaller carbon footprint, as it depends on other factors such as method of production, type of food or way in which we as customers travel to get the product. Rather than that we try to raise awareness on the issue of how we came to depend on faraway places on our food and give space for thinking about global interdependencies, the ecological debt we have towards Global South producer countries and climate change.

Packaging and waste

Packaging is any material used to hold, protect, handle, deliver and present goods. This covers the whole packaging supply chain from the raw material to the finished goods. Every year EU itself produces up to 3 billion tons of waste per year. All this waste has a huge impact on the environment, causing pollution and greenhouse gas emissions that contribute to climate change, as well as significant losses of materials – a particular problem for the EU, which is highly dependent on imported raw materials. The impact of food packaging is manifold, however, for the sake of clarity and due to our limited capacities, Map Your Meal focuses on the availability of information provided by companies regarding the management of waste packaging of the finished goods.

Every EU country government has recycling targets to meet depending on the type of material used in some countries (<http://ec.europa.eu/environment/waste/pdf/WASTE%20BROCHURE.pdf>). Companies are therefore obliged to inform consumers about return, collection and recovery systems they can use as well as their role in reusing, recovering and recycling packaging and packaging waste and what recovery and recycling symbols on packaging mean.

Palm oil usage

Palm oil has become more and more popular in the production of various products, including many food products. This is a type of vegetable oil, produced from a palm fruit. The African oil palm tree has Africa as its natural habitat, but because of increased demand it is now also grown in Asia, North and South America. Indonesia and Malaysia are now the biggest producers of palm oil. The 'Say No to Palm Oil' campaign reports that 'the palm oil industry is linked to major issues such as deforestation, habitat degradation, climate change, animal cruelty and indigenous rights abuses in the countries where it is produced, as the land and forests must be cleared for the development of the oil palm plantations.' (saynotopalmoil.com, n.d.). Industry-led initiatives like 'Sustainable Palm Oil' have been assessed by activists and experts as 'greenwashing'.



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Fishing

Fish is a high protein, low fat, healthy and nutritionally rich food. Sustainable seafood is fish/seafood caught for human consumption by fishermen operating under sustainable fishery management systems that conserve fish stocks and the ecosystems that support them. In parallel, traditional methods of capture fishing can't possibly meet the demand. Marine fishing has reached the limit of its supply. Aquaculture is the other way. It has the capacity to meet global demand while reducing the pressure on wild capture fisheries. Aquaculture is the fastest growing food production system in the world and, more than half of the fish consumed globally comes from aquaculture. But the rapid rise in demand for farmed fish presents new problems. When aquaculture is not well managed, it can have a range of adverse impacts, for example: poor site management, water pollution, disruption of local ecosystems and poor working conditions. The faster the aquaculture industry grows, the greater its potential impact on the environment and local communities. By promoting better managed fisheries and sea farms we can meet the growing demand while minimising environmental and social impacts. A world where sustainable fishing plays a major role in supplying food and social benefits for mankind whilst minimising negative impacts on the environment.

II.2 Fairness

According to the FAO, 80% of the farmland in sub-Saharan Africa and Asia is managed by smallholders (working on up to 10 hectares) who produce mainly for own consumption or sell at the local markets. Out of the 2.5 billion people in poor countries living directly from the food and agriculture sector, 1.5 billion people live in smallholder households. Many of those households are extremely poor: overall, the highest incidence of workers living with their families below the poverty line is associated with employment in agriculture (http://www.fao.org/fileadmin/templates/nr/sustainability_pathways/docs/Factsheet_SMALLHOLDERS.pdf).

At the same time it is the Global South countries' economies that rely on cash crops and export them to the North. Since prices for major cash crops are set in commodity markets with global scope, with some local variation nations, regions, or individual producers relying on such a crop are vulnerable to market volatility. Also due to historic trade relations grounded in the theories of mercantilism many Global South countries witness trade deficits as the price of raw materials including cash crops grown for export are far cheaper than ready products made from the raw materials. In this case value is usually added in Europe and ready products often resent back to countries that provided raw materials. On top of that financial trade balance statistics conceal material flow, which means that as Global North we have a huge ecological debt towards Global South, which so far has not been accounted for in international trade relations.

Around the world, the top ten retail food companies accounted for around 10.5% of all groceries bought worldwide in 2009 with combined sales reaching \$753 billion, and the ten biggest food and beverage processing firms controlled an estimated 28% of the global market for packaged food products with combined sales of \$387.5 billion in 2009 (<http://www.globalagriculture.org/report-topics/trade-and-markets.html><http://www.globalagriculture.org/report-topics/trade-and-markets.html>).



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Globally, part of the problem is that many of the poorest people simply cannot benefit from the increased production of food, because they still cannot afford it, or because they cannot gain access to it. Additionally, the methods of agricultural production that have increased productivity have themselves pushed new people into poverty. Broadly, industrialisation in agriculture has benefited larger-scale producers, and undermined the livelihoods of small-scale subsistence farmers on both hemispheres (<http://www.foodethicscouncil.org/uploads/publications/2010%20FoodJustice.pdf>).

It is a paradox that people who produce food are at the same time most vulnerable to poverty, that while some parts of the world suffer hunger and malnutrition, some other waste huge amounts of food, and that while we know that smallholder farms production is the key to global food security and sustainability and their production would suffice to feed the world population we witness situation where food production and trade became a complex system with the long chain of intermediaries on one hand, but with a handful of companies who control the production on the other, with the size of farms growing, inputs intensifying, distribution failing, people compromising other people and the environment for the sake of convenience and profits. With the realisation that fairer food system is a prerequisite for meeting wider sustainability and health goals it is thus crucial that we as consumers understand the mechanisms and actors of food production so that we can support them in making the system transparent, accountable and fair and that we act to demand for food policies that will consider social justice alongside with economic and environmental concerns. Our App aims at providing an opportunity to examine the ways in which food manufacturing companies protect the rights, wellbeing, economic stability and self-sufficiency of the farmers and other people and beings - locally and around the world. We want to know what impact companies might have on other people and beings, how they communicate about it. Due to the limitations mentioned in the introduction we selected only a few aspects that help us get a grasp of what fairness is: we look at labour rights and child labour in particular, animal rights, transparency and accountability of companies vis-a-vis consumers and also producers, the level to which companies influence decision makers. Our aim again is to see what is the aggregate sum total, the overall picture of positive choices available to consumers and promote examples of good conduct.

Labour Rights

Food is connected to Human Rights more than we can imagine. The global food production and trade system engages basically everybody in the planet as a farmer, worker, producer, trader or consumer. The families of these people are also influenced by what happens within the food chain. Unfortunately, one can find violations of Human Rights all over the system in relation to slavery, violation of working standards, child labour, limited access to education, social security and many more.

Labour rights are recognized in many common and specific conventions and agreements all over the world. According to ILO work is part of everyone's daily life and is crucial to a person's dignity, well-being and development as a human being and international labour standards are there to ensure their protection. Yet, farmers and workers across the world in food supply chains face violations. It is beyond our resources to verify the extent to which labour rights standards are respected in each company involved in the production of one food product. For this reason we are using as a baseline the level of respect for labour rights in the countries of production – both final production and where possible – production of the



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three main ingredients, in two separate indicators. These indicators are overridden in the case where a fairness certification system is in place for the whole product or for any of the ingredients.

Child Labour

Some of the basic products we consume (cocoa, vanilla, rice, sugarcane) that require intensive labour are produced by children. It is estimated that 115 million children around the world work instead of going to school. However, according to International Labour Organization (ILO) not every labour is a child labour that should be targeted for elimination since the reasons behind why children work are often complex and are almost always linked to poverty. [ILO](#) defines Child labour as: 'work that deprives children of their childhood, their potential and their dignity, and that is harmful to physical and mental development'. It refers to work that is mentally, physically, socially or morally dangerous and harmful to children; and interferes with their schooling by:

- depriving them of the opportunity to attend school;
- obliging them to leave school prematurely; or
- requiring them to attempt to combine school attendance with excessively long and heavy work.

In its most extreme forms, child labour involves children being enslaved, separated from their families, exposed to serious hazards and illnesses and/or left to fend for themselves on the streets of large cities – often at a very early age. Whether or not particular forms of “work” can be called “child labour” depends on the child’s age, the type and hours of work performed, the conditions under which it is performed and the objectives pursued by individual countries. The answer varies from country to country, as well as among sectors within countries’. For this reason, the prohibition of child labour is taken very seriously into consideration when assessing fairness of products. There are certain labels that help us assume the child labour-free products like ‘Fair Trade’, UTZ certified, Rainforest Alliance and others – and raise awareness about this big issue exposing cases of such malpractice. Another way to connect products to child labour is considering the risk of child labour in the country of production – both of the final product and its ingredients (when the latter is possible to identify).

Animal Rights

Our increased demand for animal products requires faster and larger production, leading to the increase in industrial farming which compromises not just the quality of what we eat, but importantly the quality of the living, breeding and dying conditions of animals. The recognition that animals feel the same way humans do, meaning that they are scared or angry or suffer from pain, has mobilized international support towards the rights of animals. Within our Fairness assessment we found essential to address some indicators for the respect of animal rights, such as livestock transport, as well as living, breeding and dying conditions. Products, which do not contain any animal ingredients, are scored better, as they are not violating animal rights.



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Hidden animal ingredients consist a major problem nowadays, as a variety of products contain ingredients coming from animals, which are not necessary for the quality of the product and, very often, are not even indicated on the packaging or the ingredients' list. Simply put, the consumer assumes that bread, fruit juice, fruit preserves, pickles and olives are vegan, but this is often not true.

For example, gelatine, a protein coming from animal bones is found in many desserts, drinks and even yogurts. Carmine, a red-colouring made from ground-up insects, is found in juices, sweets or even coloured pasta. One cannot truly avoid all animal ingredients, but we need to demand producing companies to indicate animal ingredients on the products, using terminology, which is comprehensible to the average consumer-citizen.

Transparency

Transparency is a necessary pre-condition for good governance in political systems, accountable to citizens and free of corruption. Transparency alone is of course not a solution to all problems, but it can provide evidence for further research and action. It is important for the consumer to have a say. The issue of accountability and transparency is multidimensional – it concerns the legal framework and regulations regarding the organizational structure, strategy and financial procedure, as well as, making all the information about policies and activities accessible to the general public. Both encompass public reporting, enhance products' credibility and are mutually reinforcing. However, many companies have been criticized include social or environmental policies in their agenda, for example, just for marketing purposes. In this app we will try to have a thorough look at the very relevant, complete and updated information that make the companies accountable publicly for their decisions through their reports and information flow in their website and wider communication. Last, we call to the consumers to also take into consideration other aspects connecting to this, based on their own judgement.

Belonging to a multinational company

A global corporation (multinational/ transnational corporation) is a company that has its facilities and other assets in at least one country other than its home country. Such companies have offices and/or factories in different countries and usually have a centralized head office where they co-ordinate global management. For the past decades of globalization they have been growing in power getting richer but also getting more centralized and homogenous. This has been reflected in the way they operate and also in terminology from multinational - transnational to global. More information [here](#).

The way global companies operate has impact on people as customers and producers as well as on the environment all around the world. Advocates of multinationals say they create jobs and wealth and improve technology in countries that are in need of such development. On the other hand, critics say global corporations can have undue political influence over governments, can exploit developing nations as well as create job losses in their own home countries.



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III. Sources, Further Reading Material and Information

<https://www.ncbi.nlm.nih.gov/books/NBK114491/>

http://www.un.org/ga/search/view_doc.asp?symbol=E/2016/75&Lang=E

<http://www.fao.org/docrep/005/y4671e/y4671e06.htm>

<http://www.srfood.org/>

<https://www.theguardian.com/sustainable-business/food-blog/10-things-need-to-know-global-food-system>



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