The Third General Assembly

Stimulating alternatives to the consumption of meat

Research Report

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Fake news

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Introduction

Meat has been a staple in the diet of most of the world. meat was first consumed around 2.6 years ago, when an evolutionary change in the human diet transferred from plants to hear and marrow from large animals. Since then, meat gradually became a major part of our diet; it was easy to find, hunt and eat, once humans discovered how to cook it. Over time, meat consumption increased and we now use meat in various ways, we fry, bake, grill and sometimes still eat it partially raw.

Around a million years ago, the world population was estimated to be around 20,000 by the University of Utah, which is nearly four hundred thousand times less than that global population at present. Due to the low population, it was easy for all people to find meat for consumption.

Now, however, meat is an extremely popular ingredient in most meals. The global population has also skyrocketed in the past 60 years, forcing farmers and cattlemen to breed more of their cattle for consumption. The desperate need for meat all around the world has forced farmers to take extreme measures in order to keep up with the rising demands and the environment is suffering from this.

The large amounts of cattle being bred for consumption also produce several greenhouse gases, as well as the process of procuring, packaging and processing the meat; it is estimated that around 18% of the total greenhouse gas emissions are from animal husbandry and meat processing. livestock emit around 64% of the ammonia in the atmosphere, along with almost 40% of the methane. Cattle also require feeding and in order to make sure there was enough food, several acres of forest and trees have been cut down so farmland for grain and wheat can be made for the cattle. The processing of the meat after it has been procured also produces greenhouse gases since this is being done in factories, which are known to produce several tons of carbon dioxide when in action.

If this mass production of meat continues, undeterred, greenhouse gas emissions will shoot through the roof. Our population is still rapidly increasing, nearing eight billion people. It is becoming difficult to provide everyone with meat and cattle breeding will increase as well. The environment and our planet are subject to several bouts of severe climate change and heat waves, some of which are already starting.

Definition of Key Terms

Animal husbandry:

Raising and breeding livestock for consumption purposes such as for milk, meat and dairy products.

Carnivory:

Obtaining food from animals.

Cattle:

Large, domesticated herbivores, such as cows, which can live on a farm or on an open field and can also be consumed as food.

Greenhouse gases:

Gases which contribute towards the greenhouse effect by absorbing infrared radiation.

Livestock:

All farm animals except for poultry.

Meat packing industry:

An industry where meat is procured, processed, packaged and delivered, poultry not included.

Plant-based diet:

A diet where all foods are procured from vegetarian sources.

Soybeans:

A white lentil originating from East Asia, now being used in several dishes globally as an alternative to meat.

Vegan diet:

A diet in which no foods which originate from animals are consumed in any form, including dairy products.

Vegetarian diet:

A diet in which no meat can be consumed, however dairy products obtained in a way that the animal will not be killed, may be consumed.

General Overview

Reducing meat production has a great influence on the environment. The report carried out by the Boston Consulting Group finds out that determined actions taken in this area are far more beneficial for greenhouse gas reduction than, for instance, zero-emission cars. According

to the UN statement, farmed livestock (especially cattle, bred for both milk and beef) are responsible for as much as 14,5 percent of all greenhouse gas emissions, to say nothing of water, energy and land usage. Moreover, the majority of crops worldwide are used to feed the animals from industrial breeding instead of being given directly to people. For this reason, the land usage is even bigger. Researchers in the pages of the January issue of PLOS *Climate* estimate that giving up on meat and dairy consumption would lower greenhouse gas emissions by half. Greenpeace predicts that reducing meat intake by 70 per cent during this decade will be necessary to prevent further escalation of environmental issues we are facing.

Meat alternatives

In recent years there has been a significant increase in the number of meat alternatives available on the market. Producers offer a vast variety of plant-based meat substitutes, such as tofu, seitan, tempeh and a wide range of products made of vegetables. Consumers can also choose cultured meat, produced by culturing animal cells, without an interference into animal's life. However, many people are still not prone to restrict meat consumption as they do not trust the quality and advantages of meat analogues.

Taste

A lot of consumers claim that many substitutes fail to taste like the real meat. Animal and plant proteins and fats differ from each other and behave differently while being cooked and processed. This makes it impossible to keep the taste and texture the same. There is a similar situation with lab-grown meat at the moment. Without the addition of other substances, such as dyes, it does not resemble traditional products. The small-scale production and high prices make it extremely difficult to popularise. Moreover, many meat-eaters find cultured meat unnatural and are not willing even to try it. These circumstances lead to posing a question in the public debate whether it is necessary to work on meat analogues instead of focusing on natural plants' features. On the other hand, the fake meat business is still developing and researchers predict that this trend will develop.

Prices

Many consumers hesitate to change their eating habits due to high prices of the majority of meat substitutes available on the market. Cultured meat's production, as it was mentioned above, is expensive and the products are not easily accessible. Plant-based alternatives are pricey in comparison with traditional analogues. Meat-eaters would more frequently choose processed meat, which is cheaper since meat of good quality remains expensive as well. However, this is paradoxically not the matter of money as much as it is the matter of mentality.Adapting meat alternatives is rather slow and many consumers find it senseless to spend money on more expensive products if they would rather eat actual meat.

Culture and traditions

The factors which influence the situation of meat alternatives on the market are cultural aspects regarding the presence of meat in national cuisines and traditions. Many citizens of the developed countries, mostly in Europe, have gained awareness recently and restricted meat consumption for environmental reasons. However, lots of consumers are still dedicated to meat as an important part of their eating habits. For instance, in the report carried out by Greenpeace it is said that an average citizen of Europe consumes about 78 kg

of meat each year. In the US, on the other hand, the United States Department of Agriculture forecast that in 2022 Americans would have access to about 225 pounds of red meat and poultry per capita, which is about 102 kg.

Meat consumption and politics

In many developed countries conflicts concerning meat consumption are likely to occur. Many politicians do not consider the meat consumption issue as a burning one because they do not want to go to war with powerful farming lobby and consumers who are used to having unlimited access to cheap meat. For example, in Spain, the consumer affairs minister, Alberto Garzon, called the Spanish nation to limit meat consumption. It has met with dissatisfaction of the prime minister, Pedro Sanches, who did not approve of this idea. In Germany, meat consumption may have fallen modestly, due to the activity of the Green party. However, its efforts have been soon described by the political opponents as the ones banning the joys of life. In Italy the debate has been going on since last year, initiated by the environment minister, Roberto Cingolani. These three examples show the general tendency in many developed countries. Despite attempts to raise consciousness and encourage people to restrict meat intake, well-known eating habits are firmly settled in the societies.

LEDCs

As it will be pointed out in further parts of the report, the debate concerning the necessity to alter the diet for the sake of the environment is up-to-date mostly in the developed countries. In contrast with them, the developing countries are struggling to satisfy their citizens' basic needs. According to the UN statistics, in 2020 between 720 and 811 million people in the world faced hunger. It is obvious that resolving this problem is a priority at the moment. Therefore, it is vital to take it under consideration in the whole discussion.

Major Parties Involved

USA

In 2020, The US consumed 21% of the global meat consumption. Americans have always been encouraged to buy and consume more meat by the powerful meat concerns which are the leaders in the mass production of meat products. However, a lot of environmental activists have called for a significant change in the food industry recently, emphasising the need to support meat alternatives production, which are gaining popularity in the country at the moment. The level of public awareness of the negative influence meat production has on the environment has risen lately, however until meat producers attract the consumers with low prices and easy accessibility of their products, the chances for the meat alternatives to become the leading ones on the market are rather small.

EU

The situation concerning meat substitutes production in Europe varies depending on politics in each country, however there has been a substantial rise in the number of citizens choosing to replace traditional meat with its alternatives and in the consumption of plant-based foods

in many EU countries recently. The governments of the EU countries have, in general, taken some action to improve the quality of meat analogues, for instance supporting the production financially. Nonetheless, it seems that is not enough when it comes to dealing with powerful meat producers.

LEDCs

The political debate on the subject of meat alternatives does not concern developing countries whose citizens need to fight extreme poverty, hunger and malnutrition. Not only cannot they afford meat substitutes, very often these products are not accessible for them at all. Furthermore, to survive they need to provide themselves with nutrients at first, which very often come from meat from their local households. Improvement of the quality of citizens' lives is a burning issue which should be resolved before the actions to reduce meat production are taken.

Timeline of Events

Date	Description of event
1877	Dr. John Harvey Kellogg developed replacements for meat made from nuts, grains and soy for patients in his sanitarium. He also sold his fake meat protose, made from wheat gluten and peanuts.
1946	First commercial production of tempeh in Europe. Tempeh is a food made from fermented soybeans and can be used as replacements for meat.
1971	Publication of Frances Moore Lappe's *Diet for small planet* (covering the topic of vegetarian diet)
1982	The first vegeburger, invented by Gregory Sams, hit the market, is now used in several fast food restaurants. The burger consists of a non-meat party.
2016	Impossible burger was created by the company Impossible foods, who claim to have invented a burger with no meat, which tastes, feels and smells like a regular beef burger.
2019	The IPCC (intergovernmental panel of climate change) released a special report stating that,

although they are not dictating what people should eat, a plant-based diet would be more beneficial for our health and for our planet's environment.

Previous Attempts At Solving The Issue

Overtime, the realisation that a meat diet can do more harm than good has come to light, and with it, so have promotions of the vegetarian and vegan diet. From the 20th century onwards, the vegetarian and vegan diet has risen and more people around the world are trying to consume less to no meat. Nowadays, vegetarian and vegan sections are found at supermarkets and more vegetarian food is served at restaurants.

Recently, in June 2022, The Dutch government has designated … to put several reforms into place to reduce the nitrogen emissions in the country. As a result of this, extreme livestock cuts were made in the Netherlands and around 11200 farms will have to be closed down. Along with this, 17600 farms are significantly reducing their livestock, which will result in less meat being produced in the Netherlands.

Possible Solutions

The majority of issues related to meat alternatives consumption revolves around increasing social consciousness of the significant impact consuming meat has on the natural environment and dealing with powerful concerns which profit from meat production. Many people nowadays are aware of challenges that need to be faced to reduce the negative effects of climate change, one of the challenges being constraining meat consumption. Many non-profit organisations start social campaigns tackling this problem; however, the governments should take more action to make environmental awareness part of each citizen's everyday life and to support meat analogues' producers to make it possible for them to thrive on the market.

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