

**Committee:** Environmental Commission (EC)

**Topic:** The question of the role of Veganism and reduced meat consumption in protecting the environment

**Student Officer:** Hannah Clark

**Position:** Deputy President

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## Personal Introduction

Dear delegates,

My name is Hannah Clark and I am a 16 year old student at Champion School. This will be my first time in a chairing position, and so far I have attended 2 conferences. I am truly honoured to serve as a Deputy President in the Environmental Commission, and I hope that the 8th Annual CSMUN Conference will be a great experience for us all.

I believe that the Environmental Commission gives delegates a very unique opportunity to explore subjects that are very relevant to each and every one of our lives, as we can see in the topics we have been given this year. This study guide will hopefully help guide you in the right direction when it comes to forming your opinions and ideas in correlation with your countries policies. I encourage you all to do further research and to fully immerse yourselves into this topic.

I look forward to working with you all, and sincerely hope that the conference will be allowed to take place regularly. With that, I wish you all the best with your research and encourage you to put yourselves out there when the time comes! Please do not hesitate to ask me any questions, I am here to help you with whatever you need, just send me an email.



Best regards and good luck with your resolutions!

Hannah Clark, [hclark@campion.edu.gr](mailto:hclark@campion.edu.gr)

## Topic Introduction

A vegan is someone who does not eat, drink, or otherwise consume or use any animal products.<sup>1</sup> This affects vegans in many different aspects of their life, ranging from the clothes they buy or the shampoo they use, to the type of milk they put in their coffee. It is a lifestyle that has been growing gradually over the years, gaining even more support.

People of all ages are making the decision to follow a vegan diet, but the highest percentage of vegans, at 40%, are between the ages of 25 and 34.<sup>2</sup> One of the main reasons for this is the fact that veganism has become a lot more popular through its portrayal in the media. This means that people who have access to social and news media and who are independent (as opposed to the 16-24 group, where half the demographic depends mostly on their family) have been influenced more. Being able to see how the meat and dairy-heavy diets of previous generations have affected the environment and their health has really pushed millennials towards veganism.

<sup>1</sup>“What Is a Vegan and Why You Should Consider Veganism.” *Reporting on Animals, Animal Rights, and Human Choices*, 5 Feb. 2020, <https://sentientmedia.org/what-is-a-vegan/>

<sup>2</sup>“Vegan Profile.” *Www.Imaner.Net*, [www.imaner.net/panel/profile.htm](http://www.imaner.net/panel/profile.htm)



Veganism has existed as a concept since the Arabic poet al-Ma‘arri, more than a thousand years ago and<sup>3</sup> the term “vegan” was first coined in 1944<sup>4</sup>. Judging exactly when veganism became popular can be complicated, however, there have been many notable surges. For example, there has been a 600% increase in vegans over the past 3 years<sup>5</sup> alone in the U.S. The amount of change and growth that the vegan “trend” has seen since 2010 is incredible, with thousands of people shifting to vegan diets, new organisations and events being created and a whole new range of products appearing on the market. It has become so well-known for a few reasons, the main ones being the fact that it is known to be a sustainable and environmentally friendly diet, that it is ethical and that it has been proven to have some health benefits.

All of the above make veganism seem like a very healthy and sustainable way of living, however, veganism does come with a few flaws. For example, studies have shown that

<sup>3</sup>Yaman, A. (2017, February 24). This 11th century Arab poet is the original hipster. Retrieved July 22, 2020, from <https://stepfeed.com/this-11th-century-arab-poet-is-the-original-hipster-0223>

<sup>4</sup> “A Brief History of Veganism.” *Time*, <https://time.com/3958070/history-of-veganism/#:~:text=Veganism%20is%20an%20extreme%20form>

<sup>5</sup> *Veganism Is at an All-Time High: Is It A Fleeting Fad or The New Norm?* 22 Dec. 2018, [www.singleplatform.com/blog/restaurant-industry/trends/the-rise-of-veganism-a-fleeting-fad-or-the-new-norm/](http://www.singleplatform.com/blog/restaurant-industry/trends/the-rise-of-veganism-a-fleeting-fad-or-the-new-norm/)



vegans sometimes face certain deficiencies in vitamins and amino acids.<sup>6</sup> Apart from that, the vegan diet has been claimed to be unsuitable for children<sup>7</sup>, as it is crucial for them, to be getting all of the necessary nutrients a normal animal and dairy based diet provides. Additionally, while the environmental problems caused by the meat industry are reduced through the increase in vegans; veganism also leaves its own carbon footprint and other environmental problems on the earth. A lot of popular vegan foods come from more exotic areas of the world and get exported all around it. Furthermore, the kind of land suitable for the production of said foods has to be within specific climates for them to grow properly, so the production of vegan options can frequently be at the expense of biodiversity, rainforests etc.

<sup>6</sup> Laidlaw, S A, et al. “Plasma and Urine Taurine Levels in Vegans.” *OUP Academic*, Oxford University Press, 1 Apr. 1988, <https://academic.oup.com/ajcn/article-abstract/47/4/660/4694739>

<sup>7</sup> Campbell, L. (0387, April 24). Is a Vegan Diet Safe for Children? Retrieved July 08, 2020, from <https://www.healthline.com/health-news/is-a-vegan-diet-safe-for-children>



## Definition of key terms

### Veganism

Veganism is a way of living which seeks to exclude [...] all forms of exploitation of, and cruelty to, animals for food, clothing or any other purpose.<sup>8</sup>

### Animal products

Materials derived from the body of an animal.<sup>9</sup> This can be anything, from the meat taken from its body, to the milk taken from its udders, to the skin taken off its back.

<sup>8</sup>“Definition of Veganism.” *The Vegan Society*, [www.vegansociety.com/go-vegan/definition-veganism](http://www.vegansociety.com/go-vegan/definition-veganism)

<sup>9</sup>Rauch, Joseph. “What Are Animal Products and Byproducts?” *Public Goods Blog*, 22 Apr. 2020, <https://blog.publicgoods.com/what-are-animal-products-and-byproducts/>



## Animal husbandry

A branch of agriculture concerned with the production and care of domestic animals.<sup>10</sup> Its focus is to breed and raise animals with the aim to derive the various products they produce (meat, eggs, milk, skin, fat).

## Factory farming (or intensive animal farming)

A system of farming in which a lot of animals are kept in a small closed area, in order to produce a large amount of meat, eggs, or milk as cheaply as possible.<sup>11</sup>

<sup>10</sup>“Animal Husbandry.” *Merriam-Webster*, Merriam-Webster, [www.merriam-webster.com/dictionary/animalhusbandry](http://www.merriam-webster.com/dictionary/animalhusbandry)

<sup>11</sup>“FACTORY FARMING: Meaning in the Cambridge English Dictionary.” *Cambridge Dictionary*, <https://dictionary.cambridge.org/dictionary/english/factory-farming>



## Paris Agreement

The Paris Agreement is an international treaty that seeks to reduce the emission of greenhouse gases.<sup>12</sup> Its aim is to limit global warming temperatures to 1.5° and to provide adequate support for countries in their efforts to battle climate change.

## Demitarianism

Cutting one's meat consumption in half.<sup>13</sup> This is a diet encouraged by the UN mainly to people from first world countries to try and reduce meat consumption where it is possible.

## Background Information

<sup>12</sup>Rouse, Margaret. "What Is Paris Agreement? - Definition from WhatIs.com." *SearchDataCenter*, TechTarget, 2 June 2017, <https://searchdatacenter.techtarget.com/definition/The-Paris-Agreement>

<sup>13</sup> "Demitarian." *Academic Dictionaries and Encyclopedias*, [https://new\\_words.enacademic.com/1006/demitarian](https://new_words.enacademic.com/1006/demitarian)



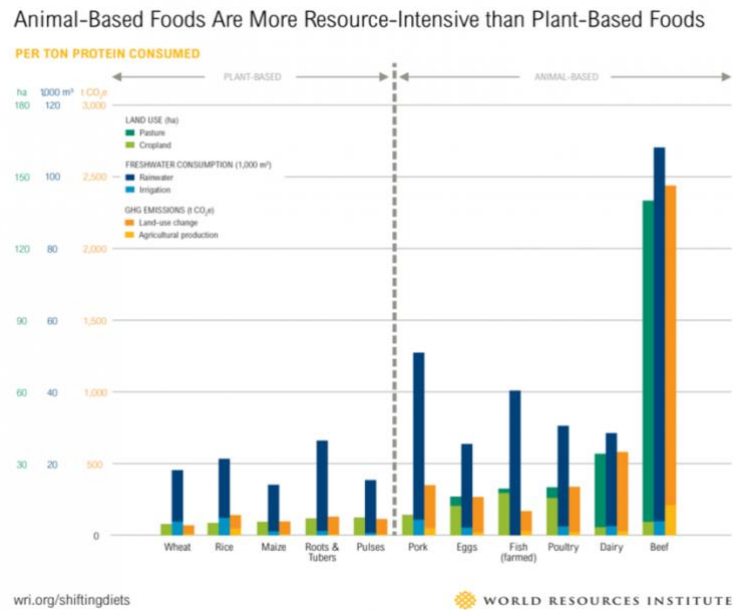


Fig.1 Shows the difference in the resources required to produce animal products and plant based products

The term vegan was first coined by Donald Watson in 1944<sup>14</sup>, an English advocate and activist for animal rights. 80 years later, veganism has become a worldwide movement,

<sup>14</sup>“Where Did The Word ‘Vegan’ Come From?” *Dictionary.com*, Dictionary.com, 23 Dec. 2019, [www.dictionary.com/e/veganism/](http://www.dictionary.com/e/veganism/)





with over 600,000 vegans recorded solely in Great Britain in 2019 by the Vegan Society.<sup>15 16</sup>

Veganism and mainly the reduction in meat consumption have been proven to have a major impact on the environment. The U.N. has spoken out in a climate report back in August 2019, warning that the dairy and meat consumption, namely in HICs (Higher Income Countries), are contributing heavily to global warming.<sup>17</sup> The land and water required to produce meat and dairy products is higher than that needed for vegan options.<sup>18</sup> Methane emissions from cows as well as the issues the Amazon rainforest is facing due to the land expansions from both meat and dairy companies and plant based products companies. The U.N., along with many other organisations and

<sup>15</sup>“Statistics.” *The Vegan Society*, [www.vegansociety.com/news/media/statistics](http://www.vegansociety.com/news/media/statistics)

<sup>16</sup> Bobby Magill Follow @bobbymagill. “Studies Show Link Between Red Meat and Climate Change.” *Climate Central*, 20 Apr. 2016, [www.climatecentral.org/news/studies-link-red-meat-and-climate-change-20264](http://www.climatecentral.org/news/studies-link-red-meat-and-climate-change-20264)

<sup>17</sup> Chiorando, Maria. “New UN Climate Report Branded 'Incredibly Important' For Veganism.” *Vegan News, Plant Based Living, Food, Health & More*, 12 Aug. 2019, [www.plantbasednews.org/news/new-un-climate-report-incredibly-important-veganism](http://www.plantbasednews.org/news/new-un-climate-report-incredibly-important-veganism)

<sup>18</sup> Newcastle, Jemima WebberContributing Writer |, et al. “Going Vegan Could Free Up 75% of Land, Says New Oxford Study.” *LIVEKINDLY*, 7 July 2018, [www.livekindly.co/global-land-use-beef-vegan/](http://www.livekindly.co/global-land-use-beef-vegan/)



corporations, such as the BBC,<sup>19</sup> encourage people to start following vegan diets, or at least try to reduce meat and dairy consumption.

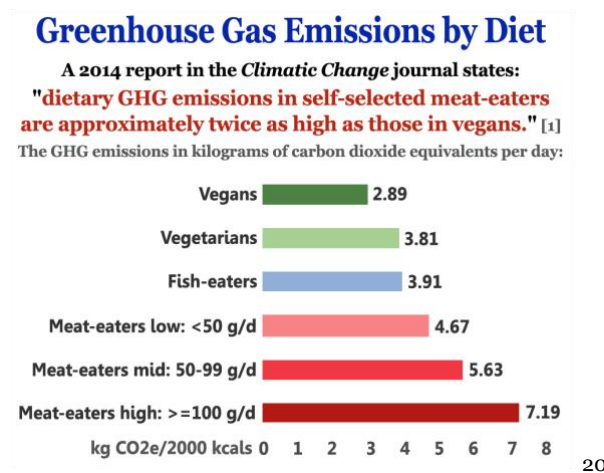


Fig.2 Shows greenhouse gas emissions by diet

<sup>19</sup> Harrabin, Roger. "Plant-Based Diet Can Fight Climate Change - UN." *BBC News*, BBC, 8 Aug. 2019, [www.bbc.com/news/science-environment-49238749](http://www.bbc.com/news/science-environment-49238749)

<sup>20</sup> "Climate Change & Pollution: How Much Is Due to Meat & Dairy?" *Www.EatingOurFuture.com*, 29 Nov. 2019, <https://eatingourfuture.wordpress.com/meat-dairy-diet-increases-climate-change-pollution-damage-to-our-environment/>



## Paris Climate Agreement

The Paris Climate Agreement was signed on the 22nd of April 2016 and went into effect on the 4th of November that same year. It was negotiated by the 196 parties of UNFCCC (United Nations Framework Convention on Climate Change) in an area called Le Bourget in France. Its aim is to reduce greenhouse gas emissions and consists of measures that will help developed countries reduce their pollution.<sup>21</sup> Countries that have not signed the agreement include Iran, Iraq, Turkey, Libya and Angola. These countries have not signed for various reasons. For example, both Turkey and Iran, who have increased emissions in the past 20 years<sup>22</sup>, have made promises to reduce gas emissions by 21% and 4% respectively by 2030 on their own accords.<sup>23</sup> The United States is in the process of withdrawing, and their official withdrawal is set to happen on the 5-year anniversary of the agreement, the 4th of November 2020.<sup>24</sup>

<sup>21</sup>December 12, 2. (2020, April 29). Paris Climate Agreement: Everything You Need to Know. Retrieved July 14, 2020, from <https://www.nrdc.org/stories/paris-climate-agreement-everything-you-need-know>

<sup>22</sup> Sauer, Soila Apparicio and Natalie. “Which Countries Have Not Ratified the Paris Climate Agreement?” *Climate Home News*, Climate Home, 13 Mar. 2020, [www.climatechangenews.com/2020/03/01/countries-yet-ratify-paris-agreement/](http://www.climatechangenews.com/2020/03/01/countries-yet-ratify-paris-agreement/)

<sup>23</sup> Sauer, Soila Apparicio and Natalie. “Which Countries Have Not Ratified the Paris Climate Agreement?” *Climate Home News*, Climate Home, 13 Mar. 2020, [www.climatechangenews.com/2020/03/01/countries-yet-ratify-paris-agreement/](http://www.climatechangenews.com/2020/03/01/countries-yet-ratify-paris-agreement/)

<sup>24</sup> Sauer, S. (2020, March 13). Which countries have not ratified the Paris climate agreement? Retrieved July 14, 2020, from



This agreement has changed the way countries have been dealing with climate change, but the question of how effective it has actually been so far has been debated, it being one of the reasons the US will be withdrawing. The UN published a report ('Emissions Gap Report')<sup>25</sup> in 2019 revealing that the climate goals are not being met, and that if action is not taken soon, the agreement will fail and the world will have missed the opportunity to act "before it is too late".<sup>26</sup>

The People for Ethical Treatment of Animals (PETA) have also spoken out about this issue, stating that: "*There is no pathway to achieve the Paris climate objectives without a massive decrease in the scale of animal agriculture*".<sup>27</sup> A New York Times

<https://www.climatechangenews.com/2020/03/01/countries-yet-ratify-paris-agreement/>

<sup>25</sup> Environment, U. (2019, November 26). Emissions Gap Report 2019. Retrieved July 14, 2020, from <https://www.unenvironment.org/resources/emissions-gap-report-2019>

<sup>26</sup> Sengupta, S. (2019, November 26). 'Bleak' U.N. Report on a Planet in Peril Looms Over New Climate Talks. Retrieved July 14, 2020, from <https://www.nytimes.com/2019/11/26/climate/greenhouse-gas-emissions-carbon.html>

<sup>27</sup> UN Environment. "Tackling the World's Most Urgent Problem: Meat." *UN Environment*, <http://www.unenvironment.org/news-and-stories/story/tackling-worlds-most-urgent-problem-meat>



study has shown that the most harmful towards the environment vegan diet is still worse than the most eco-friendly diet that includes dairy and meat.<sup>28</sup> This is purely because while the meat and dairy consumed may be 100% responsibly and locally sourced, the amount of land and water needed is still greater, and cattle will still emit quantities of methane gas.

## Business

A transition into veganism from a business point of view would undeniably benefit the economy. For one, an Oxford study showed that the world economy could save up to \$1.6 trillion by 2050 if people start consuming less meat and turning to a more plant based diet.<sup>29</sup> On top of that, industries now have the chance to expand on the production of new vegan products, opening up a whole new field of marketing and new business opportunities. For example, Great Britain saw a 185% increase in the number of vegan products introduced between 2012 and 2016<sup>30</sup>. It is true that the decrease in meat consumption would affect the economies of many countries; however, this loss

<sup>28</sup>How to Eat on a Planet Suffering From Climate Change. (2019, May 03). Retrieved July 14, 2020, from <https://www.peta.org/blog/climate-change-new-york-times/>

<sup>29</sup> Springmann, M., Godfray, H., Rayner, M., & Scarborough, P. (2016, April 12). Analysis and valuation of the health and climate change cobenefits of dietary change. Retrieved July 08, 2020, from <https://www.pnas.org/content/113/15/4146>

<sup>30</sup>Hancox, Dan. “The Unstoppable Rise of Veganism: How a Fringe Movement Went Mainstream.” *The Guardian*, Guardian News and Media, 1 Apr. 2018, [www.theguardian.com/lifeandstyle/2018/apr/01/vegans-are-coming-millennials-health-climate-change-animal-welfare](http://www.theguardian.com/lifeandstyle/2018/apr/01/vegans-are-coming-millennials-health-climate-change-animal-welfare)



of money from the meat industries could definitely be offset by the new vegan food market, as shown in an Australian study by Vegan Australia, a vegan organisation:<sup>31</sup> While there would be an initial 1% reduction in the GDP of Australia caused by lower consumption of meat, the rise in the production and sale of vegan products would make up for this loss, as new vegan businesses start appearing and existing businesses expand their markets to suit this new lifestyle.

## Ethics

The ethical side of veganism is one major reason why people convert to this diet. It is common knowledge that the way that animals are treated in dairy and meat industries is rarely ethical. Evidently, there can only be so much non-harmful treatment towards animals that are destined to be slaughtered for the use of their meat. The frequent use of factory farming within the industry is a prime example of the “abuse” towards animals. The selective breeding used in factory farming means that slowly animals are starting to share even more of the same DNA with each other, which will in the future make them more susceptible to diseases, especially genetic ones. The animals are also kept in terrible conditions, frequently in overcrowded places, increasing the likelihood of disease spreading and of injuries.

<sup>31</sup> Impact of a vegan agricultural system on the economy. (n.d.). Retrieved July 08, 2020, from [https://www.veganaustralia.org.au/impact\\_of\\_a\\_vegan\\_agricultural\\_system\\_on\\_the\\_economy](https://www.veganaustralia.org.au/impact_of_a_vegan_agricultural_system_on_the_economy)



While the vast majority of meat consumers definitely do not partake in the first-hand derivation of animal products, they do support the rough treatment of those animals by buying these products. Nevertheless, switching to a vegan diet isn't the only way one can stop supporting this. One of the easiest steps to take without vastly changing one's diet would be to make sure that all products they consume are responsibly sourced, from farms that take proper care of the animals and do not practise factory farming, selective breeding etc. Governments should definitely be encouraging this type of farming and be overseeing the correct upholding of responsible practices in this industry.

On the contrary, veganism isn't always ethical either. Animals are obviously not abused and killed for vegan products to be produced and it is quite a sustainable way of living. However, several issues concerning the vegan diet and vegan product consumption and production have been evident. For example, the soybean industry which is used for two of the biggest staple vegan products: soy milk and tofu, and can be found in most coffee shops, supermarkets and restaurants in HICs are a great source of protein and ideal substitutes for dairy milk and animal meat; nevertheless one of the biggest sources of soybean is found in Brazil, in the Amazon rainforest, taking up 33 million hectares of it (out of 350 million hectares).<sup>32</sup> Aside from this, not only is the rainforest being harmed, but indigenous land belonging to indigenous people in the rainforest are being threatened by the ever-expanding soybean

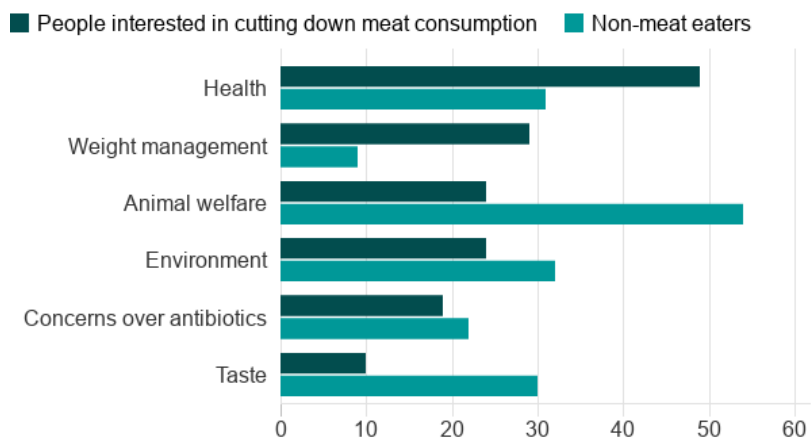
<sup>32</sup> Pulitzercenter. "Q&A: How a Soybean Boom Threatens the Amazon." *Pulitzer Center*, 19 June 2019, <https://pulitzercenter.org/reporting/how-soybean-boom-threatens-amazon>



industry<sup>33</sup>. This is only one example, and its pattern is repeated in almond production, avocado production, chia seeds and many more vegan consumed products.

**People give a variety of reasons for eating less meat**

% of respondents citing each reason (more than one could be given)



Note: Survey of 1,040 British adults. Source: Lightspeed/Mintel



34

Fig.3 Shows various reason for the reduction of meat consumption among British adults

<sup>33</sup> Pulitzercenter. “Q&A: How a Soybean Boom Threatens the Amazon.” *Pulitzer Center*, 19 June 2019, <https://pulitzercenter.org/reporting/how-soybean-boom-threatens-amazon>

<sup>34</sup> Jones, L. (2020, January 02). Veganism: Why are vegan diets on the rise? Retrieved July 22, 2020, from <https://www.bbc.com/news/business-44488051>





## Environment

The amount of water needed to produce a pound of beef is 100-200 times the amount needed to produce a pound of plant-based food.<sup>35</sup> If someone were to cut down on the beef they consume per month by one kilogram, they would save up to 15,000 litres of water.<sup>36</sup>

Animal farming requires lots of land, which frequently results in biodiversity being destroyed. According to PETA, 90% of Amazon rainforest cleared since 1970 has been used to graze livestock.<sup>37</sup> This, along with the huge carbon footprint left by the exporting of meat and dairy products from places all around the world, is a big environmental issue that has played a part in pushing many towards going vegan. Another problem caused by the meat industry is the frighteningly large amount of methane emissions caused by humans that comes purely from cattle. Currently at

<sup>35</sup> “9 Reasons Why Going Vegan Is Better For The Environment.” *Global Citizen*, [www.globalcitizen.org/en/content/9-reasons-why-veganism-can-save-the-world/](http://www.globalcitizen.org/en/content/9-reasons-why-veganism-can-save-the-world/)

<sup>36</sup> “9 Reasons Why Going Vegan Is Better For The Environment.” *Global Citizen*, [www.globalcitizen.org/en/content/9-reasons-why-veganism-can-save-the-world/](http://www.globalcitizen.org/en/content/9-reasons-why-veganism-can-save-the-world/)

<sup>37</sup> “Meat and the Environment.” *PETA*, 8 Jan. 2019, [www.peta.org/issues/animals-used-for-food/meat-environment/](http://www.peta.org/issues/animals-used-for-food/meat-environment/)



37%,<sup>38</sup> methane from cows is more than twice as much as the methane produced by oil and gas industries.<sup>39</sup>

But it's not just the meat industry that is having negative effects on the environment; some of the most popular components of a vegan diet are foods like almonds, cashews, avocados, soya in various forms which also have a negative impact on the environment. Their production mainly happens in slightly more tropical environments, mainly in places in South America and California. The production of soy, for example, which takes place mainly in the Amazon rainforest in Brazil (33 of the 350 million hectares are used for soybean production).<sup>40</sup>

<sup>38</sup>Staff, S. (2019, July 05). Study shows potential for reduced methane from cows. Retrieved July 08, 2020, from <https://phys.org/news/2019-07-potential-methane-cows.html>

<sup>39</sup>Iea. (n.d.). Global methane emissions from oil and gas – Analysis. Retrieved July 08, 2020, from <https://www.iea.org/articles/global-methane-emissions-from-oil-and-gas>

<sup>40</sup>Pulitzercenter. “Q&A: How a Soybean Boom Threatens the Amazon.” *Pulitzer Center*, 19 June 2019, <https://pulitzercenter.org/reporting/how-soybean-boom-threatens-amazon>



## Health

One of the major advantages of veganism is the health benefits. For one, veganism has been proven to reduce risk of heart disease<sup>41</sup> and colorectal cancer<sup>42</sup>. It is safe to say, that it is quite a cleansing diet, free of many of the harmful fats and preservatives found in so many of the daily foods consumed by people in HICs. It's also a good, healthy option for gradual weight loss, mainly due to the fact that it helps to improve digestion in the stomach.<sup>43</sup>

In the contrary, there are studies that have proven that there are various deficiencies in vitamins, minerals and nutrients that vegans face. For one, vegans have less taurine present in their bodies.<sup>44</sup> Taurine is an amino acid that is very useful in the protection

<sup>41</sup> (n.d.). Retrieved July 08, 2020, from <https://www.nhs.uk/news/food-and-diet/vegetarian-diet-linked-lower-risk-heart-disease-higher-risk-stroke/>

<sup>42</sup> Canter, L. (2018, September 11). Going vegetarian to cut colon cancer risk. Retrieved July 08, 2020, from <https://medicalxpress.com/news/2018-09-vegetarian-colon-cancer.html>

<sup>43</sup> Petter, Olivia. "I Went Vegan for 10 Weeks and This Is What Happened to My Body and Mind." *The Independent*, Independent Digital News and Media, 1 Jan. 2020, [www.independent.co.uk/life-style/food-and-drink/vegan-diet-benefits-changes-weight-loss-mindset-plant-based-meals-a8254201.html](http://www.independent.co.uk/life-style/food-and-drink/vegan-diet-benefits-changes-weight-loss-mindset-plant-based-meals-a8254201.html)

<sup>44</sup> Laidlaw, S A, et al. "Plasma and Urine Taurine Levels in Vegans." *OUP Academic*, Oxford University Press, 1 Apr. 1988, <https://academic.oup.com/ajcn/article-abstract/47/4/660/4694739>



of various important bodily functions, such as metabolism, protection against brain aging and many more. Another study showed the importance of vitamin B12 and the lack of it among vegetarians and vegans.<sup>45</sup> This is problematic due to the fact that this vitamin is crucial for the proper function of the nervous system, as well as in the production of DNA and red blood cells.<sup>46</sup>

## Major countries and organizations involved

### UNITED STATES

Between 2% and 6% of US citizens are vegan.<sup>47</sup> Plant-based products in the US rose by 31.3% between 2017 and 2019.<sup>48</sup> While the US has yet to encourage vegan foods within their dietary guidelines released every five years, they did introduce vegetarian options

<sup>45</sup> Rizzo, Gianluca, et al. “Vitamin B12 among Vegetarians: Status, Assessment and Supplementation.” *Nutrients*, MDPI, 29 Nov. 2016, [www.ncbi.nlm.nih.gov/pmc/articles/PMC5188422/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC5188422/).

<sup>46</sup> West, H. (n.d.). 9 Signs and Symptoms of Vitamin B12 Deficiency. Retrieved July 22, 2020, from <https://www.healthline.com/nutrition/vitamin-b12-deficiency-symptoms>

<sup>47</sup> Bourassa, Lacey, et al. “Vegan and Plant-Based Diet Statistics.” *PlantProteins.co*, 27 Feb. 2020, <https://plantproteins.co/vegan-plant-based-diet-statistics/>

<sup>48</sup> Slabakova, Boriana. “The Age of Veganism: Vegan Statistics for 2020 (Infographic).” *HealthCareers*, 26 June 2020, <https://healthcareers.co/vegan-statistics/>



in the guidelines in 2010.<sup>49</sup> Finally, the US is going to be withdrawing from the Paris Agreement in November 2020, as President Trump has expressed that the agreements are unfair towards the US, posing a big economic burden on Americans.<sup>50</sup>

## UNITED KINGDOM

The UK has witnessed the number of vegans quadruple from 2014 to 2019. However, the government denied responding to a 2018 petition of 10,000 signatures that called for the introduction of at least one vegan option on every menu of public sector establishments. But, there has been a large increase in the number of vegan products sold in supermarkets across the country, with nearly 1 in 4 food products released in 2019 being vegan.<sup>51</sup> A British non-profit organisation founded in January 2014 called Veganuary<sup>52</sup> has been encouraging people to go vegan every year for the month of

<sup>49</sup> Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2010. USDA, 2010. Web, September 5 2011

<https://www.fns.usda.gov/dietary-guidelines-previous-guidelines>

<sup>50</sup> “On the U.S. Withdrawal from the Paris Agreement - United States Department of State.” *U.S. Department of State*, U.S. Department of State, 2 Dec. 2019, [www.state.gov/on-the-u-s-withdrawal-from-the-paris-agreement/](http://www.state.gov/on-the-u-s-withdrawal-from-the-paris-agreement/)

<sup>51</sup> “Statistics.” *The Vegan Society*, [www.vegansociety.com/news/media/statistics](http://www.vegansociety.com/news/media/statistics)

<sup>52</sup> Inspiring People To Try Vegan. (n.d.). Retrieved July 22, 2020, from <https://uk.veganuary.com/about>



January, as an effort to inspire people to adopt it as a lifestyle on a more long term basis.

## ARGENTINA

Argentina is one of the biggest beef producers in the world<sup>53</sup>. Eating meat is part of Argentinian culture and a staple part of festivities. While there has been an increase in veganism of the past years, the topic still sparks quite an intense debate which has at times in the past led to some forms of violence<sup>54</sup>. Argentina has also been considered to be one of the worst countries in South America regarding animal protection and treatment.<sup>55</sup> Argentina has the highest pets per capita in the world<sup>56</sup>, but that has not

<sup>53</sup> 23, Rob Cook, Published on: Jul. “World Beef Production: Ranking Of Countries.” *Beef2Live*, <https://beef2live.com/story-world-beef-production-ranking-countries-0-106885>

<sup>54</sup> Ariel Gaster - Fabio Devin :: Dorve.com. “Vegan and Animal Rights Activists Stage Protest at Exposición Rural.” *The Bubble*, 31 July 2019, [www.thebubble.com/vegan-activists-protest-at-exposicion-rural](http://www.thebubble.com/vegan-activists-protest-at-exposicion-rural)

<sup>55</sup> Ariel Gaster - Fabio Devin :: Dorve.com. “Argentine NGOs Stand Alone in the Fight Against Animal Abuse.” *The Bubble*, 29 Aug. 2018, [www.thebubble.com/argentina-animal-abuse-proyecto4patas](http://www.thebubble.com/argentina-animal-abuse-proyecto4patas)

<sup>56</sup> “Argentina: the Country with the Most Pets Per Capita.” *My Animals*, 15 Jan. 2019, <https://myanimals.com/animals/argentina-the-country-with-the-most-pets-per-capita/>



changed the fact that there are currently approximately 6 million domesticated animals that have been abandoned in the capital, Buenos Aires, alone.<sup>57</sup>

## INDIA

While India hasn't actually made any major changes to their policies or released any specific publication concerning veganism, their culture in itself is on a large scale vegetarian, with eggs being avoided as well due to the fact that they are considered meat there. India has 3 main religions, and all of them support the practice of “*ahimsa*”, non-violence towards all beings. The only non-vegan products that are a key part of Indian culture are dairy products.<sup>58</sup> India is the world's largest producer of milk and a leading producer of poultry and livestock<sup>59</sup>, ranking 5th biggest beef producer in the world<sup>60</sup>

<sup>57</sup> Ariel Gaster - Fabio Devin :: Dorve.com. “Argentine NGOs Stand Alone in the Fight Against Animal Abuse.” *The Bubble*, 29 Aug. 2018, [www.thebubble.com/argentina-animal-abuse-proyecto4patas](http://www.thebubble.com/argentina-animal-abuse-proyecto4patas)

<sup>58</sup> Werneth, W. (n.d.). The Most Vegan Countries in the World. From <https://blog.mangolanguages.com/the-most-vegan-countries-in-the-world>

<sup>59</sup> “FAO.org.” *India at a Glance | FAO in India | Food and Agriculture Organization of the United Nations*, [www.fao.org/india/fao-in-india/india-at-a-glance/en/](http://www.fao.org/india/fao-in-india/india-at-a-glance/en/)

<sup>60</sup> 23, Rob Cook “World Beef Production: Ranking Of Countries.” *Beef2Live*, <http://beef2live.com/story-world-beef-production-ranking-countries-0-106885>



## THE NETHERLANDS

The Netherlands have shown a big decrease in meat consumption over the past few years, while at the same time there has been an increase in the production and sales of vegan options. A 2019 IRI Netherlands study has shown that meat sales have dropped by 7% and that there has been a 51% increase in vegan food sales since 2017.<sup>61</sup>

### World Wide Fund for Nature (WWF)

WWF published a report in 2017, 'Appetite for Destruction'<sup>62</sup>, which revealed the significance of the effects that humans' lifestyles and habits have on the earth, encouraging people to consume less and to work towards finding other ways to produce products consumed on a daily basis.

### Food and Agriculture Organisation (FAO)

FAO is an official U.N. organisation which aims to defeat hunger across the world. FAO published a set of dietary guidelines that urge people to turn towards a more sustainable lifestyle, highlighting how important sustainable lifestyles are for the

<sup>61</sup>Newcastle, Jemima Webber Contributing Writer |, et al. "Vegan Food Up 51%, Meat Sales Down 9% In Netherlands." *LIVEKINDLY*, 21 Aug. 2019, [www.livekindly.co/vegan-food-up-meat-sales-down-netherlands/](http://www.livekindly.co/vegan-food-up-meat-sales-down-netherlands/)

<sup>62</sup> Appetite for destruction. (n.d.). Retrieved July 14, 2020, from <https://www.wwf.org.uk/updates/appetite-for-destruction>





environment.<sup>63</sup> A representative of FAO also spoke out with a valuable statement, giving a warning that veganism is not for everyone, where he stressed that as a diet it comes with a series of deficiencies that could make life difficult for certain groups of people (such as children).<sup>64</sup>

## GREENPEACE

Similarly, to WWF, Greenpeace International published a report in March 2018 revealing how much meat and dairy consumption and production contributed to climate change. They also launched a campaign called ‘Less Is More’, which advocated for dairy and meat consumption to be reduced by 50% on a worldwide scale by 2050. Within this campaign they also encouraged an increase in plant-based production and consumption.

Aside from that, in 2019, their website had the following published on it:

“Switching to organic, plant-based foods from local eco-farms, reducing (or eliminating) meat and dairy consumption, and even growing some of your own food are all steps that help combat climate change, protect forests and waterways, and make us healthier and happier.”

63 Dietary guidelines and sustainability. (n.d.). Retrieved July 14, 2020, from <http://www.fao.org/nutrition/education/food-dietary-guidelines/background/sustainable-dietary-guidelines/en/>

64 Michalopoulos, S. (2019, June 06). FAO official: 'Veganism is certainly not for everyone'. Retrieved July 14, 2020, from <https://www.euractiv.com/section/agriculture-food/interview/fao-official-veganism-is-certainly-not-for-everyone/>



## Timeline of events

973-1057	Arab poet al-Ma`arri's lifetime (first know vegan)
1918	First ever vegan restaurant opened in LA, California called the Eutropheon
1944	Donald Watson coins the term “vegan” and co-founds The Vegan Society
1988	<i>The American Journal of Clinical Nutrition</i> published a study on the effects of a vegan diet on one's body, showing that a distinct lack of taurine (amino acid with many different functions, such as regulating immune system, maintaining electrolyte balance in cells) <sup>65</sup>
2005	A study showed vegans to have a vitamin B12 deficiency. It also found a correlation between the amount of vitamin B12 in a person's body and their IQ. <sup>66</sup>

<sup>65</sup>Laidlaw, S A, et al. “Plasma and Urine Taurine Levels in Vegans.” *OUP Academic*, Oxford University Press, 1 Apr. 1988, <https://academic.oup.com/ajcn/article-abstract/47/4/660/4694739>

<sup>66</sup> Rizzo, Gianluca, et al. “Vitamin B12 among Vegetarians: Status, Assessment and Supplementation.” *Nutrients*, MDPI, 29 Nov. 2016, [www.ncbi.nlm.nih.gov/pmc/articles/PMC5188422/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC5188422/)



2014	Veganuary launches (United Kingdom)
2014-17	Number of vegans in the USA increase by 600% between 2014 and 2017 67
2016	Paris Agreement in effect from 4th of November
2017	A study found that there is a stark deficiency in choline in people who follow vegan diets. <sup>68</sup>
2018	Oxford study shows that while animal farming takes up 83% of farmland, its products only contribute to 18% of calories consumed. <sup>69</sup>
2018	Greenpeace report shows contribution of dairy and meat industry to the environment, launches ‘Less is More’ campaign.

<sup>67</sup>Forgrieve, Janet. “The Growing Acceptance Of Veganism.” *Forbes*, Forbes Magazine, 2 Nov. 2018, [www.forbes.com/sites/janetforgrieve/2018/11/02/picturing-a-kindler-gentler-world-vegan-month/](http://www.forbes.com/sites/janetforgrieve/2018/11/02/picturing-a-kindler-gentler-world-vegan-month/)

<sup>68</sup>VL;, Wallace TC;Fulgoni. “Usual Choline Intakes Are Associated With Egg and Protein Food Consumption in the United States.” *Nutrients*, U.S. National Library of Medicine, <https://pubmed.ncbi.nlm.nih.gov/28783055/>

<sup>69</sup>“New Estimates of the Environmental Cost of Food.” *University of Oxford*, [www.ox.ac.uk/news/2018-06-01-new-estimates-environmental-cost-food](http://www.ox.ac.uk/news/2018-06-01-new-estimates-environmental-cost-food)



2019	Royal Academy of Medicine of Belgium deems vegan diet ‘unsuitable for children’
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## Previous attempts to solve the issue

The U.N. has encouraged governments to introduce dietary guidelines that are sustainable and healthy, following the example set by countries like Sweden, the Netherlands and the UK.<sup>70</sup> It has also encouraged a general reduction in the consumption of meat to help slow climate change and curb the amounts of gas emissions in a report in 2019.<sup>71</sup>

The U.N. additionally established this decade as the Decade of Family Farmers. This means that they aim to help support family farms and to help encourage policies that will help them. Family farming is one of the best ways of farming; it provides lots of jobs, it's sustainable and helps to protect land, it encourages genetic diversity and seed diversity, and its general approach to farming is heavily influenced by agroecology,

<sup>70</sup> UN study urges governments to develop guidelines that promote 'win-win' diets | | UN News. (n.d.). Retrieved July 14, 2020, from <https://news.un.org/en/story/2016/05/529712-un-study-urges-governments-develop-guidelines-promote-win-win-diets>

<sup>71</sup> Schiermeier, Q. (2019, August 08). Eat less meat: UN climate-change report calls for change to human diet. Retrieved July 14, 2020, from <https://www.nature.com/articles/d41586-019-02409-7>



leading to a very significant lack of greenhouse emissions and use of chemicals within the farms.

Knorr Foods partnered with WWF in 2019 to produce a report title ‘Future 50 Foods’, encouraging people “to shift consumers towards a more diverse mix of vegetables and plant-based sources of protein, and a larger selection of grains and cereals,” hoping that it will help to slow the negative effects our current consumption is having on the environment.

## Relevant UN Resolutions, Events, Treaties and Legislation

### Paris Climate Agreement (UNFCCC):

The Paris Climate Agreement went into effect on the 4th of November, 2016<sup>72</sup>. Its aim is to encourage more focus to be put on the growing issue of climate change, by aiming to stop the global temperature rising to anything above 2°C in this century and by helping ensure that all countries are able to deal with the various effects of climate change. Over the last five years, there has been a struggle to meet the aims of the agreement. After the U.N. Emissions Gap Report 2019 came out, PETA stated that due to this struggle to meet the Paris Agreement aims, action should be taken by people in their everyday lives, encouraging them to start moving towards a vegan diet. As it is a straightforward and easy way to lower one’s carbon footprint, there isn’t much to say against it in terms of tackling climate change.

<sup>72</sup> “FAQs About How the Paris Agreement Enters into Force.” *World Resources Institute*, 10 Oct. 2017, [www.wri.org/faqs-about-how-paris-agreement-enters-force](http://www.wri.org/faqs-about-how-paris-agreement-enters-force)



### Intergovernmental Panel on Climate Change (IPCC) report

In 2019, 107 U.N. scientists<sup>73</sup> worked together to produce a report which highlighted the importance of land in relation to climate change, providing suggestions and options for more sustainable living, land use and development. In this report, in Chapter 5, the report focused on food security. Amongst other information, it clearly stated that “*Consumption of healthy and sustainable diets presents major opportunities for reducing GHG emissions from food systems and improving health outcomes*”<sup>74</sup>.

### Decade of Family Farmers

The U.N. has declared that the years 2019-2028 will be the Decade of Family Farmers, with the official resolution declaring this passed in 2017.<sup>75</sup> The U.N. through this action aims to encourage and inspire people to support family farming and to uphold the values, beliefs and practices of the family farming community.

<sup>73</sup> Harrabin, Roger. “Plant-Based Diet Can Fight Climate Change - UN.” *BBC News*, BBC, 8 Aug. 2019, [www.bbc.com/news/science-environment-49238749](http://www.bbc.com/news/science-environment-49238749)

<sup>74</sup> “Chapter 5 - Food Security” *IPCC*, 25 Sept. 2019

<https://www.ipcc.ch/srccl/chapter/chapter-5/>

<sup>75</sup> FAO.org. (n.d.). Retrieved July 14, 2020, from <http://www.fao.org/family-farming/detail/en/c/1099026/>



### FAO/WHO Dietary Guidelines

The Food and Agriculture Organization (FAO) and the World Health Organisation (WHO) collaborated in 2019 to create a set of dietary guidelines that encourage the adoption of a sustainable and healthy diet.<sup>76</sup> The guideline provides very useful and detailed information, showing how one's diet is linked with the environment.

### Possible solutions

A basic solution would be to encourage citizens to eat locally: one of the biggest issues that can be seen both with animal farming and veganism is the carbon footprint left by the different modes of transportation used to ship food globally; if people eat food that has been manufactured in more local areas (as in it doesn't have to travel thousands of kilometres from its place of origin to your local supermarket), then the carbon footprint will be reduced. Eating locally will also mean that less farmland will be needed, so that instead of millions of hectares being used by a handful of farmers in one part of the world, smaller, more sustainable farms can be used to have a smaller sphere of influence, serving at most one whole country.

Another possible solution would be to encourage citizens to go vegan, or to implement certain aspects of a vegan diet into their own, following a more demitarian diet. This can be anything from not eating certain meats, or dropping dairy milk, or even just cutting back on their purchases of animal products. This can happen through public

<sup>76</sup> “Document Card : FAO: Food and Agriculture Organization of the United Nations.”  
FAO, [www.fao.org/documents/card/en/c/ca6640en/](http://www.fao.org/documents/card/en/c/ca6640en/)



events, advertising, and as countries like Sweden<sup>77</sup> have already, including vegan recommendations within national dietary guidelines. Education of citizens is also necessary. Ways that this could happen would include presentations and assemblies in schools that talk about this matter, TV programmes and even advertising, events held in public places etc. etc.

An additional way to combat this issue would be to introduce strict regulations concerning the number of hectares each country / company / farmer is allowed to have to farm, the amount of livestock they are allowed to keep etc. etc. A closer eye needs to be kept on this field of production. Furthermore, a possibility would be the introduction of a programme that would aim to downsize the land used by existing agricultural industries.

Additionally, rules must be put in place (or improved if they already exist) that will help to monitor the conditions in which livestock are kept, concerning the limit of animals allowed to be kept in barns / fields of a certain size, the number of times they are allowed to be milked etc. etc. Generally, policies that will try and improve the wellbeing of animals.

To maintain these regulations, it is important that frequent and efficient inspections on farms must be made compulsory and non-negotiable. Failure to do so (from each

<sup>77</sup> Food Climate Research Network (FCRN): Knowledge for better food systems. (n.d.). Retrieved July 22, 2020, from <https://www.fcrn.org.uk/research-library/new-swedish-dietary-guidelines-integrate-sustainability-and-health-aspects>





country) must be looked down upon by other member states and must result in action and some form of penalty.

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