



# Veganism and Its Challenges: The Case of Iceland

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## Abstract

Our research discusses how four main ethical challenges to veganism manifest in the context of Iceland. Veganism is becoming an increasingly popular lifestyle in many parts of the world, especially in OECD countries. Studies on the motivation for choosing a vegan lifestyle (which includes, but is not restricted to, following a vegan diet) include ethical considerations, dietary choices, personal health, taste, religious and political beliefs, or environmental concerns. Ethics plays a particularly important role, and as such, veganism has become a central object of interest in recent conversations on animal rights and welfare among ethicists. Our analysis reviews four ethical challenges (i.e., the challenge of universality, demandingness, causal impotence, and the least environmental harm principle) in the literature that problematize the norms and rationale underpinning veganism and vegan discourse and discusses how each applies within the context of Icelandic society and geography. We conjecture that the particular economic, demographic, and geographic characteristics of Iceland indicate that being vegan in Iceland does not free oneself of having global social and environmental impacts on account of chosen dietary options. All diets constitute global systems that account for dependencies and opportunities, vulnerabilities, and strengths, which may challenge the assumption that veganism is a more socially and environmentally sustainable dietary option within this particular regional context.

**Keywords** Veganism · Environmental ethics · Iceland · Sustainability · Agriculture

## Introduction

Veganism is becoming an increasingly popular lifestyle in many parts of the world, especially in OECD countries. At its core, veganism is the practice of avoiding “eating or otherwise using products made from or by animals” (McPherson, 2018, p. 209). Individuals may hold different reasons for opting for a vegan lifestyle (which includes, but is not restricted to, following a vegan diet), such as ethical considerations, dietary choices, personal health, taste, religious and political beliefs, or environmental concerns (Buttny & Kinefuchi, 2020; Janssen et al., 2016; Kortetmäki & Oksanen, 2020; Martinelli & Berkmanienė, 2018; McPherson, 2018). Collectively, the sets of beliefs for choosing a vegan lifestyle articulate a complex and diversified web of loosely defined vegan practices that simultaneously shape and are shaped by vegan practitioners. These practices necessarily impact society at large, transforming veganism into a set of performative actions invested with distinct individual, social, political, economic, and cultural repercussions and consequently expanding the notion of veganism to include substantial normative and descriptive considerations.

Recent scholarship has begun to chart, not without difficulties, this emerging heterogeneous landscape of veganism. Among these, *ethical veganism*—perhaps the broadest, most popular, and most diversified type of veganism in the academic discourse—places ethical arguments and motivations (rather than political, aesthetic, gustatory, health-related, or other motivations) at the forefront to justify abstention from the use and/or consumption of animal products. *Identity veganism* holds “that the only ethical way to live is to adopt a vegan lifestyle” (Jones, 2016, p. 25), whereas *boycott veganism* preaches “an ethically and politically motivated abstention from participating in the exploitation of animals, which includes not consuming them as food and commodities and otherwise refusing to participate in their use” (Dickstein et al., 2020, p. 4; see also Jenkins & Stănescu, 2014). *Political veganism* (expressed in various political shapes and forms) is configured as a revisionary, aspirational, and intersectional practice not solely abstaining from the consumption of animal products but also “the structures and institutions that link the commodification and exploitation of animals, vulnerable human populations, and the environment” (Jones, 2016, p. 31). *Absolute veganism* categorically abolishes the use of animals for any human purpose, arguing “that using animals or insects as a source of food, clothing, and more, is immoral; and even that we should reject all products that have been experimented on animals—unconditionally” (Alvaro, 2017, p. 766; see also McPherson, 2018). Many of these types of veganism share common ethical grounds; however, they differ from one another primarily in the weight given to the specific *reasons* why vegans, or people in general, ought to abstain from consuming or otherwise using animal-derived products.

In recent years, veganism has also developed strong ties with environmental discourses related to anthropogenic global warming, climate change, land degradation, biodiversity loss, chemical pollution, and more. Many of these threats to Earth system stability (Rockström et al., 2009; Steffen et al., 2018) and thus to human societies are related to intensive animal farming, which is directly responsible for a major input of greenhouse gas emissions into the atmosphere, water consumption, and deforestation—among other impacts. The overall environmental impact of factory farming has

thus become particularly linked to people's reasons for choosing a vegan diet. Indeed, copious literature shows that meat-based diets have a higher environmental impact than vegan diets (Chai et al., 2019; Clark et al., 2019; Scarborough et al., 2014; Vieux et al., 2012). This makes a vegan lifestyle a particularly praised solution to contemporary environmental challenges stemming from the food industry, particularly factory farming (Janssen et al., 2016). With an increasing world population, issues of food security, sustainability, and environmental protection combine to engender "one of the greatest challenges of the twenty-first century: meeting society's growing food needs while simultaneously reducing agriculture's environmental harm" (Foley et al., 2011, p. 337).

However, veganism is not completely free from challenges and issues that, if this practice truly holds to its promise of social and environmental change, need to be systematically engaged with. Some of these challenges relate to the ethical, environmental, nutritional, or social implications of choosing a vegan lifestyle. These challenges are *universal* insofar as they emerge from both the theories and practices of veganism: choosing a particular lifestyle and dietary practice has certain implications that apply to all individuals subscribing to it. However, each challenge manifests differently across *individual* geographical, cultural, and economic contexts. This means that local and regional studies should provide a more insightful account of veganism not solely in terms of people's motivations but also in terms of how vegan challenges materialize in different national contexts.

Thus, in the present study, we seek to understand how certain ethical challenges to veganism manifest on a local scale by considering Iceland as our case study. Our goal is to understand what—if any—problems arise from an ethical standpoint when vegan principles are applied in the context of Icelandic society. To avoid ambiguity, this analysis does not advocate against veganism or discourage it. In contrast, our intent, in addition to exploring a territory yet uncharted by academic scholarship, is grounded in the idea that further and contextualized research on veganism is necessary to tackle existing ethical discourses related to the global food industry and the environment. As such, our research finds value in setting a preliminary and unprecedented space for conversation in the context of veganism in Iceland—hopefully kickstarting further research on veganism in small island-nations or across the Arctic community.

In our contribution, we first survey the literature on the ethics of veganism, selecting four challenges that have been cardinal in ongoing discussions on the ethical foundation of vegan practices. Afterward, we shift focus to Icelandic society, providing basic but essential information related to Iceland's territory, demographics, and agricultural sector. This snapshot is germane to understanding how veganism manifests on the local scale and what research (if any) has attempted to understand and forecast the impact of this practice. Then, we develop a discussion by confronting each selected ethical challenge in the Icelandic context. Finally, concluding remarks on the future of veganism in Iceland are given.

## Four Challenges to Veganism

Veganism as a lifestyle presupposes reasons for engaging with it that are quite often grounded in ethics. Studies on people's motivations for opting for veganism show that ethical considerations are almost ubiquitous in all vegans, ranging from animal welfare to environmental concerns (Buttney & Kinefuchi, 2020; Fox & Ward, 2008; Janssen et al., 2016; Pickett, 2021; Turner, 2017). Philosophers during the 2nd half of the 20th century began to systematically develop ethical arguments to justify veganism, often converging on the premises that it is morally/ethically wrong to cause unnecessary suffering to nonhuman animals and that the production of animal products causes unnecessary suffering and death (Jones, 2016; Mancilla, 2016; McPherson, 2018). In recent scholarship, the contributions of Peter Singer's (1975) utilitarian approach (i.e., welfare balance) and Tom Regan's (1983) deontological approach (i.e., animal rights) have been particularly influential in informing ongoing conversations on the ethics of veganism, providing reasons why we ought to abstain from consuming or otherwise using animal-derived products. More recently, virtue ethics has also (re)emerged as a third alternative approach to ethical veganism (Alvaro, 2017; Hursthouse, 2006).

While offering a promising pathway in the environmental arena (Chai et al., 2019), even veganism is not free from some challenges arising from the rationale underpinning its discourse. In this section, we briefly summarize four of the main challenges to ethical veganism that emerged in philosophical literature during the past two decades before moving to how each of these challenges specifically relates to Icelandic society. While doing so, it should be kept in mind that our goal is not to develop an argument against veganism but rather to understand how these challenges manifest when applied in a specific context. The challenges we survey do not exhaust the spectrum of arguments problematizing veganism—that is, arguments for consuming animal products (see Fischer, 2018 for such a survey)—nor do they exhaustively problematize all arguments advocating for veganism. The selection of a specific pool of challenges follows from what we see as an immediate and intuitive pertinence to the social, economic, and cultural setting of Iceland—which we articulate in Sect. 3.

### The Challenge of Universality

A first challenge is related to *who* exactly ought to adopt vegan practices. Ethical veganism holds that *we all* ought to abstain from consuming or otherwise using animal products. Stricter versions of ethical veganism—what McPherson (2018) defines as 'Broad Absolutist Veganism'—hold that we all ought to do so *under any given circumstance*. Strict or not, ethical veganism arguably always entails claims of universality not least because *ethics* is involved: we consider some course of actions to be (or not to be) ethically good or bad not just for our own sake but for a larger community of people and, at its broadest, for all members of our species—*pace* ethical relativism.

However, who is this 'we' in the underpinning norms of ethical veganism? Is it safe to assume that all humans should abstain from consuming or otherwise using animal products? Intuitively, some classes of individuals seem not to fit this category

so easily—as rightfully pointed out by Kathryn Paxton George (1990, 1994). Low-income individuals with scarce food access certainly seem less ethically obliged to abstain from animal products than wealthy individuals with a vast selection of easily accessible food options. Combined physiological differences between sexes, ages, and ethnicities equally challenge the universality of vegan claims, as different individuals in different circumstances may need to consume higher energy and nutrient-dense food, which are more easily found in animal products. Personal health is a crucial factor as well: people whose lives necessarily depend on medications whose existence depends on animal testing or people with certain meat-based nutritional requirements *should* consume or use animal-derived products because they ought to safeguard their welfare. This type of consideration leads George (1990) to argue that “(1) any rule requiring strict vegetarianism cannot apply to the population at large but only to particular humans in particular circumstances; (2) only a small number of people are required to become vegetarians today; and (3) adopting a vegetarian ideal as a social goal would itself be immoral” (p. 173).<sup>1</sup>

Some authors have considered such instances to be *exceptions*: these classes of individuals are *excused* from the ethical-vegan norm of abstention from animal products. Conversely, “[t]hose of us living in affluent consumer culture under late capitalism, where plant-based alternatives to meat and dairy are readily available, are morally obligated to adopt vegan practice” (Jones, 2016, p. 15). However, being *excused* seems to be a precarious solution in that by “routinely excusing what they consider to be morally wrong”, vegan theorists “end up systematically discriminating against the vast majority of the human population” (Mancilla, 2016, p. 6). George (1994) is again critical of this approach because it relegates these classes of individuals “to a moral underclass of beings who, because of their natures or cultures, are not capable of being fully moral” (p. 23). Thus, if the ethics of veganism cannot rest on solid universal claims, then a possible alternative might be probing into specific contexts and situations to assess how, and if, ethical-vegan norms apply. Feasibly, this solution engenders further problems because, in addition to leading easily to ethical relativism or several forms of ad hoc arguments, it seems to disintegrate the very purpose of ethical veganism—that is, drafting *universal* norms.

### The Challenge of Demandingness

A second challenge relates to *what* exactly veganism demands. There is no single answer to this: in fact, some ethicists have even pointed out that the very principles underpinning veganism may, counterintuitively, entail the consumption of *some* animal products (Bruckner, 2015; Fischer, 2016; Milburn & Fischer, 2021). In principle, veganism is defined by the abstention from using or otherwise consuming animal-based products—chief among these meat from factory farming but also a vast array of dairy products. Stricter versions of veganism go as far as rejecting cosmetics, medicines, hygiene products, clothing, and all those goods whose coming to exist-

<sup>1</sup> The author seems to use “strict vegetarianism” to indicate veganism, which is the main target of the argument she advances. Thus, while the quote explicitly refers to vegetarianism, the arguments also apply to veganism.

tence was possible through using animals. Setting aside health care products derived from animal testing, some of which are necessary for human welfare, one can focus on certain aspects that veganism demands us to revise and reconsider—in particular, *gustatory*, *financial*, and *cultural aspects*.

For instance, abstention from meat implies giving up the gustatory pleasure often associated with it. In formulating a defeasible version of ‘conscientious omnivore,’ Terence Cuneo (2015) notes that “most dairy and plant-based foods lack some of the properties of meat that so many enjoy,” admitting, however, that “[t]he vanguard of food technologies has, apparently, produced plant-based products that are, even to experts, indistinguishable in taste and texture from meat” (pp. 31–32). A study by North et al. (2021) on vegan, vegetarian, and omnivore motivations in Australian dietary choices shows that the major motivating factor for omnivores was taste and enjoyment. It is reasonable to infer that this may be a leading motivation across different geographical and cultural contexts.

The perception among omnivores is that vegan products (especially ready-made wrapped products) tend to be expensive (Greenebaum, 2018; Souza et al., 2020), meaning that shifting toward a vegan diet is perceived as financially demanding. (Andreoli et al., 2021; Engel Jr., 2000) This is particularly difficult to assess because the terms of comparison, which can vary from proteins-per-grams to gustatory pleasure, diet-specific expenses over a fixed time, or location-to-consumption price ratio, are often blurred and not clearly defined—even less contextualized locally or regionally (i.e., vegan products may be cheaper or more expensive than meat in certain parts of the world).

Adopting a vegan diet may also be demanding because it could lead to abandoning certain cherished traditional animal-based foods. For instance, many indigenous communities around the Arctic support their livelihoods by hunting and consuming animal products (including polar bears among the Inuit), and ceasing these practices would represent a serious threat to their cultures (Audlaluk, 2020). Thus, veganism may appear to be excessively demanding for certain individuals or groups of people and certain circumstances.

### **The Challenge of Causal Impotence**

A third challenge relates to the individual impact of vegans on the factory farming industry. It has been noted that while it is morally wrong to cause massive and unnecessary harm to animals via factory farming, “it doesn’t immediately follow that it’s wrong for a middleman to purchase the products derived from those processes, nor that it’s wrong for a consumer to purchase a can of Spam that has passed through any number intermediaries before landing on the local grocery store’s shelf” (Fischer, 2018, pp. 243–244). Reasonably, one could object (from a utilitarian perspective) that the “middleman,” by reducing the demand for animal products, would reduce the supply and thus the amount of animal suffering. However, it is far from certain that an individual’s choice not to purchase the final product of the long supply chain of factory farming has any effect on the market by reducing demand and thus impacting animal welfare. More likely, a certain threshold should be reached by the *collective* action of individuals before the market begins to respond. What is evident, how-

ever, is that middlemen increase their own welfare by consuming animal products (Budolfson, 2015). This type of challenge questions the efficacy of an individual's food choices in specifically affecting the factory farming industry. Markets structuring this industry "are too massive to be sensitive to the purchasing behaviors of any single consumer" (Jones, 2016, p. 19), while small and family-sized farms may be reasonably affected by the aggregate decrease in demand from individual consumers.

Notably, this challenge is particularly pressing insofar as veganism is constructed around the notion that abstention from animal products minimizes animal suffering. One could construe veganism on a deontological approach and, while the same causal impotence would persist, it would not weigh as much as it would in utilitarian terms because preservation of animal rights (rather than maximizing welfare) would be the underpinning ethical norm. In this case, it would not matter whether the consumer has little effect on the factory farming supply chain: what matters is choosing whether to be part of a process that systematically violates animal rights.

### The Challenge to the Least Environmental Harm Principle

A fourth challenge relates to the environmental impact of vegan diets. It is well established in the literature that agriculture is a major driver of climate change via water use, pollution, land degradation, and greenhouse gas emissions. Factory farming plays a central role in this: livestock production is responsible alone for approximately 14% of anthropogenic greenhouse gas emissions (Swain et al., 2018). Several studies on the environmental impact of the farming industry seem to suggest that veganism is the most environmentally responsible dietary option (Chai et al., 2019; Seymour & Utter, 2021), presenting veganism as the *de facto* solution to today's diet-related environmental challenges.

However, some scholars have pointed out that veganism does not always represent the most sustainable and environmentally friendly alternative. For instance, a study on diet-associated greenhouse gas emissions (GHGE) based on the French population by Vieux et al. (2012) shows that, while red meat and deli meat were the major food groups associated with GHGE, diet-associated GHGE increased when iso-caloric compensation was applied for fruits and vegetables. In other words, compensating meat (high GHGE) with food with low energy density (low GHGE), such as fruits and vegetables, has a higher environmental impact than consuming meat, raising questions "regarding the possibility of significantly reducing the environmental impact of the food sector through dietary changes" (p. 98). Moreover, the production and shipment (often via ship or plane, the two least environmentally friendly means of transport) of vegan products consumed far away from their original place of production may outweigh the environmental impact of eating local animal-based products. This is the case, for instance, with avocado, soy, maize, and more recently with the so-called 'superfoods' (Loyer, 2016b; Magrach et al., 2020)—the latter also leading to further problems of food justice and cultural appropriation.

Ethicists have contested that veganism is a harm-free solution or that the rejection of factory farming products necessarily leads to abstention from animal products tout court (Holdier, 2016; Milburn & Bobier, 2022). In revisiting Regan's case for veganism, Davis (2003) argues that many animals are killed in the process of producing

vegan or vegetarian food when fields are harvested or land is converted for agricultural use. It then follows from the least environmental harm principle—that is, we ought to choose the least environmentally harmful lifestyle (Bruckner, 2015)—that a mixed plant-based and pasture-forage-ruminant diet is a better solution than strict veganism. Scholars have questioned the empirical claims and estimates made by Davis, yet the argument is suggestive in saying that harm is an unavoidable practice in securing food for human societies—even for veganism.

## Contextualizing Veganism in Iceland

Now that four of the main ethical challenges to veganism have been outlined, our next step is defining the context in which these challenges materialize. As anticipated, our analysis takes Iceland as the case study for developing this research. In this section, we summarize some key data concerning the demography, geography, and agriculture and trade sectors in Iceland<sup>2</sup> and review literature documenting the phenomenon of veganism in the country. Our premise is that if general ethical challenges to veganism manifest differently across national boundaries, then a contextual analysis of veganism must first consider those basic social, economic, geographic, and environmental facts germane to the practice of veganism—including the territory, the population, and data relative to the agriculture and food industry. These data can then be discussed (in Sect. 4) to gain a better understanding of how ethical challenges to veganism materialize in Icelandic society.

### Iceland's Agricultural Sector

Iceland is a Nordic country located in the North Atlantic at the intersection of the Mid-Atlantic Ridge—a geographical feature that separates the North American and Eurasian tectonic plates. Barely touching the Arctic Circle at the island of Grímsey in its northeastern corner, Iceland is characterized by a subpolar oceanic climate and is warmed by the Gulf Stream. Its geological features are optimal for harnessing geothermal power, and six power stations are currently operating in the country, producing both electricity and hot water for house heating. However, some adverse environmental conditions characterizing the island (exacerbated in wintertime) make it difficult to be self-sufficient in terms of crop production. Out of 103,000 km<sup>2</sup> of land, approximately 64,000 km<sup>2</sup> is wasteland, 12,000 km<sup>2</sup> are glaciers, and the coastal line covers just above 6,000 km<sup>2</sup> of the territory.<sup>3</sup> Erosion from strong winds, limited

<sup>2</sup> Most data and statistics mentioned in this section are retrieved from Statistics Iceland (Hagstofa Íslands), the governmental agency responsible for collecting, processing, and disseminating data on the country's economy and society. Notably, not all data is available for the year when this research has been conducted (i.e., 2022), thus data from this website are slightly diachronous in respect to the past few years. We assume that no major changes have occurred when data has not yet made available. We also borrow several statistics and key useful considerations from a summary of the local agricultural sector made by Torfi Jóhannesson (2010) from the Agricultural University of Iceland.

<sup>3</sup> Geographical data about Iceland is available on Statistics Iceland at the following link: [https://px.hagstofa.is/pxen/pxweb/en/Umhverfi/Umhverfi\\_\\_1\\_natturfur\\_\\_1\\_landlysing/UMH01001.px/table/](https://px.hagstofa.is/pxen/pxweb/en/Umhverfi/Umhverfi__1_natturfur__1_landlysing/UMH01001.px/table/)



sunlight during the long winter, low temperatures during summer, unpredictable fluctuations in temperature all year round, and volcanic eruptions further aggravate the development of a self-sufficient plant-based industry (Jóhannesson, 2010).

These climatic and territorial characteristics also affect how the population is distributed across the island. Iceland was permanently settled between the 9th and the 11th centuries by Norse and Celtic migrants—a process Icelanders call the *landnám-söld*. As of January 2022, the population reached over 376,000 inhabitants with a mean age of 38.5 years, primarily inhabiting the coastal regions of the island. This also makes it one of the countries with the lowest population density in the world, with an average of 3.6 people per km<sup>2</sup> compared, in the Nordic context, to 17.7 in Norway, 18.2 in Finland, 25.5 in Sweden, 38.5 in the Faroe Islands, and 139.9 in Denmark. While the sheer population number is low, it has witnessed an almost threefold increase since 1945, reflecting a general global trend in population increase during the Great Acceleration—namely, a steep increase in socioeconomic and Earth system trends during the 2nd half of the 20th century (McNeill & Engelke, 2014; Steffen et al., 2015). Approximately two-thirds of the population lives in the south-western region around the capital city Reykjavík, which, with approximately 134,000 people, is the most populated municipality in the country by a great margin.

These geographic, climatic, and demographic characteristics result in a “vulnerable and non-competitive agricultural industry” (Jóhannesson, 2010, p. 5). As anticipated, crop cultivation is especially affected by this—with the supply of fruits and vegetables even experiencing an ongoing decrease since 2014 (Iceland Directorate of Health, 2021). As of 2010, cultivated land in Iceland amounted to 1,160 km<sup>2</sup>, equivalent to 1.2% of the territory—although land potentially suitable for cultivation has been estimated to reach as much as 6,150 km<sup>2</sup> (6.0%). This occurs mostly via permanent grassland, although barley production “has increased rapidly and accounts now for 4.1% of cultivated land” (p. 22) in recent decades. Iceland’s main crop products include cereal grains (7,488 tons produced in 2021) and potatoes (6,355 tons).<sup>4</sup> These are followed by cucumbers (2,067 tons) and tomatoes (1,234 tons), both of which are cultivated in greenhouses. Below the 1,000 ton threshold are carrots, mushrooms, turnips, lettuce, broccoli, cabbage, pepper, red cabbage, cauliflower, and Chinese cabbage. Crop production also includes animal feed, such as dried hay and silage. The hardship in developing locally sustainable crops implies that the majority of cultivated products need to be imported. For instance, Iceland does not cultivate fruits (if one considers tomatoes and cucumbers as vegetables), which are imported primarily from South America and Europe. Vegetables and cereals are also extensively imported, amounting to 15,008.9 and 23,652.0 tons, respectively, in 2021—with more than half of each imported from Europe. Indeed, the Icelandic population

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<sup>4</sup> A drop of 1,000 tons in the production of potatoes was recorded between 2020 and 2021. See <https://www.bbl.is/frettir/um-thusund-tonna-minni-kart%C2%ADofluuppskera-a-sidastari?fbclid=IwAR19MFoUv-59vPSLIr22cuwVzxlE5Kr6KKBKhmj2cVgfcY8kiSIVC0yUIa2w> (Accessed 21 April 2022). The tons equivalent of potatoes production seems to have decreased substantially over time, especially since the 1980s, although yearly production tends to be highly variable (e.g., from 1991 to 1994, yearly production was 15,131, 6,292, 3,913, and 11,145 tons, respectively).

“has always been dependent on imported grain” (Jóhannesson, 2010, p. 9) to match domestic demand.

While crop cultivation needs to be complemented by imported goods—including fertilizer, which is essential to Icelandic agriculture (as well as to other parts of the world)—to meet local demand, Iceland is self-sufficient in terms of livestock, hosting a single breed of dairy cows, sheep, goats, and horses that have remained almost entirely isolated since the settlement of Iceland. While its macroeconomic impact is not as influential as tourism, aluminum smelting, or fishing (the country’s major economic sectors), “it is a most important element for [the] traditional way of living in rural Iceland” (Jóhannesson, 2010, p. 20). Pigs (2,994) and laying hens (187,565) are sufficient to meet local demand, despite their associated production emerging only by the end of the 20th century. Most livestock products, revolving primarily around milk and meat, are consumed domestically, and only a small portion is exported, the majority of which is exported to Europe. While the dairy and meat industry meets local demand (although pork, beef, and poultry are still imported in discernible amounts), animal feed needs to be imported. In 2021, 164,268.5 tons of animal feed were imported from Europe (the main importer by an outstanding margin), complementing the 2,134,283 m<sup>3</sup> of total hay yield produced in that year.<sup>5</sup>

Fishing is one of the major economic sectors in Iceland, and its industry gravitates around fisheries, fish processing, and fish marketing—supported by a wide network of interrelated local industries (Sigfusson et al., 2013). Like farming, fishing in Iceland is a practice deeply rooted in the country’s history. Major changes in the fishing industry occurred first in the early 1800s, with the advent of sail-powered vessels, and then at the beginning of the 20th century with the introduction of motorized and steam-powered vessels (Government of Iceland, 2022). In 2021, with a fleet of 1,549 vessels, the total catch from all species in all places of landing amounted to 1,158,284 tons—a catch equivalent in value to €1.17 billion. Iceland is self-sufficient in terms of fishing and is a net exporter of fish and fish products. The seafood sector generates thousands of jobs, thus representing a key ingredient in the country’s economy and social structure.

In addition to traditional fishing, aquaculture has increased steadily over the years, particularly since 2015. Aquaculture mostly gravitates around the production of salmon and Arctic char. With a total catch of 53,136 tons in 2021, aquaculture contributes to 4.4% of total seafood production.

Fish and fish-based products are widely popular in Icelandic society, and much of the local food industry gravitates around fish products. According to data relative to 2019 from the Food and Agriculture Organization, Iceland ranks first in the world in terms of the quantity of aggregated seafood fish in kilograms per capita per year (91.19 kg/capita/yr.). This figure exceeds by far other Nordic countries such as Norway (50.57), Finland (33.5), Sweden (32.39), and Denmark (26.54).<sup>6</sup> The Icelandic dietary survey (Gunnarsdóttir et al., 2022) reports an average consumption of 315 g

<sup>5</sup> Statistics Iceland does not provide the tons equivalent for the total hay yield.

<sup>6</sup> Data retrieved from <https://www.fao.org/faostat/en/#data/FBS> (accessed 26 May 2022). Seafood fish includes freshwater fish, demersal fish, pelagic fish, marine fish (other), crustaceans, cephalopods, mollusks (other), and aquatic animals (others).

of fish per week by the average Icelander—which is below the 375 g per week value recommended by the Icelandic Directorate of Health.

### Veganism in Icelandic Research

As observed in the previous section, the particular climatic and territorial conditions of Iceland make it difficult to develop self-sufficient crop production. This implies that a locally sustainable vegan industry—intended as locally produced, sold, and consumed vegan products to consistently maintain a vegan lifestyle—is virtually nonexistent, and many products composing a vegan diet must be imported.

Relatedly, literature documenting the phenomenon of veganism in Iceland is extremely scarce—from academic, governmental, and business perspectives. Only two theses for completion of BA studies seem to have directly addressed veganism in Iceland in the local academic context.<sup>7</sup> Veganism appears only marginally (and is mentioned once) in the 2019–2021 dietary survey of the Iceland Directorate of Health (Gunnarsdóttir et al., 2022). Out of 822 participants aged between 18 and 80 years who were asked if they followed any specific diet, only ten (1%) responded that they followed a vegan diet, with the vast majority (85%) not following any specific diet. This value is lower than in other Nordic countries such as Sweden (4%), Denmark (4%), Norway (4%), and Finland (2%).<sup>8</sup> The absence of extensive studies on veganism in Iceland makes it difficult to assess people's motivations for choosing a vegan diet or lifestyle and discern among types of veganism that could potentially manifest in the country. Moreover, little is known about how and if veganism occurs in more remote and rural regions of Iceland and how veganism is impacted by the distance from the capital harbor, which is the shipping destination of most of the vegan products imported into the country.

Overall, the phenomenon of veganism in Iceland remains vastly unexplored, leaving many questions concerning how this lifestyle manifests in Icelandic society as well as a substantial vacuum in the academic and social discourse. This vacuum requires immediate attention—not least because, without a proper understanding of how veganism manifests or *could* manifest itself in Iceland, it is difficult to forecast any of its possible cultural, economic, social, or health impacts on the country. We shall address this aspect once more in the conclusions.

### Discussion

We can begin our discussion by considering how the first challenge outlined in Sect. 2—the challenge of universality—relates to the Icelandic context. This challenge questions the universal reach of the vegan imperative to understand who precisely ought to abstain from eating or otherwise consuming animal products.

<sup>7</sup> See <https://skemman.is/handle/1946/35907> and <https://skemman.is/handle/1946/22935> (both accessed on 27 April 2022).

<sup>8</sup> Data on veganism among Nordic countries are retrieved from Motrøen (2020), and are based on data collected in 2020.

A recurrent persona falling under vegan ethical obligations is the overall wealthy individual with ample access to food choices. For instance, Jones (2016) states that “those of us living in affluent consumer culture under late capitalism, where plant-based alternatives to meat and dairy are readily available, are morally obligated to adopt vegan practice” (p. 15). Similarly, Engel’s (2000) argument for the immorality of eating meat targets those “who live in agriculturally bountiful societies in which a wealth of nutritionally adequate alternatives to meat are readily available” (p. 859). This view seems to focus on the economic and social well-being of individuals and groups of people in determining *who* is morally obliged to abstain from animal-based products: if you can afford it, you should do it.

Does this view apply to the Icelandic context? Iceland is a high-income OECD country. It ranks fourth on the 2020 Human Development Index (Conceição, 2020) and third on the 2022 World Happiness Report (Helliwell et al., 2022). As of May 2022, NUMBEO (a crowdsourcing website for general societal statistics) reports an average net salary of €3,570.44 for the capital city Reykjavík<sup>9</sup>—a value above the national average (€3,140.37) and the average European net salary and placing it among the top 25 countries in the world with the highest purchasing power parity and nominal GDP per capita. These basic data reflect that Iceland is a wealthy nation and that the average Icelander does not face starvation, malnutrition, or lack of food security. In contrast, the average Icelander benefits from sustainable financial access to a substantial range of local and imported products in their local *Bónus*, *Hagkaup*, *Krónan*, and other department or convenience stores, discounts, or grocery shops. These products include a selection of food, notably fruits, vegetables, and nondairy products, that represent the cornerstone of a vegan diet. Therefore, it seems that the average inhabitant of Iceland, living in a highly developed, economically wealthy, and overall happy country, is ethically obliged to adopt a vegan practice.

Let us assume this conclusion to be true: the average, wealthy Icelander is ethically obliged (because he or she is financially capable) to maintain a vegan lifestyle. The main problem with this conclusion is not so much *who* ought to adopt a vegan diet as its environmental consequences, meaning that the challenge of universality is coupled with that of the least environmental harm principle. Section 3 describes how fruits and vegetables need to be massively imported from South America and Europe, as the Icelandic territory does not permit a self-sufficient crop cultivation industry—unlike the fish and animal industry. These products are imported via plane or ship from places far away from their location of consumption, meaning that a vegan diet *may* have a higher environmental impact (e.g., CO<sub>2</sub> equivalent) than a locally sustained omnivore diet. Therefore, the wealth-based argument for the universality of ethical practices seems to lead to a dilemma—that is, whether to follow the vegan ethical norm of abstinence from animal-based products but potentially contribute to a higher environmental impact than an omnivore diet based on locally produced meat or to consume locally produced meat while disengaging from the universalism of the vegan ethical norm (for as long as Iceland is not capable of generating and maintaining a sustainable and self-sufficient plant-based industry).

<sup>9</sup> See <https://www.numbeo.com/cost-of-living/in/Reykjavik?displayCurrency=EUR> (Accessed 4 May 2022).

The environmental consequences of veganism in Iceland are also closely tied to possible forms of exacerbation of inequality in global food justice. Emblematic of this are superfoods (Loyer, 2016a, b). A ‘superfood’ is a marketing designation used to describe a pool of mostly (though not exclusively) vegan products generally associated with high health and nutritional properties without artificial enhancements (i.e., ‘natural’). While produced mostly in developing countries, their demand in high-income countries (Iceland among them) has increased substantially over the past few decades. A study by Magrach and Sanz (2020) shows that the production of food items that are often labeled superfoods (coconut, cacao, quinoa, açai, avocados, blueberries, and almonds) is often associated not only with major environmental concerns (e.g., water depletion, soil degradation, deforestation, biodiversity loss, land conversion) but also with issues of a socioeconomic nature. For instance, 60% of coconut farmers (mainly in Indonesia and the Philippines) “currently live under the poverty line with incomes far below the cost of inputs and subject to the variations in the global coconut oil market” (p. 269). The production of avocados is tied, in Mexico, to issues related to extortion payments by avocado farmers to local drug cartels, and in Chile, to a shortage of water availability associated with the large water requirements of avocado plantations. Advocated by Chiquita (2020) as “one of the *world’s best superfoods*,” bananas—which Iceland imports from Ecuador and represents the most imported fruit with a value of €4.54 million in 2020<sup>10</sup>—has also a dark side related to labor exploitation, child labor, and union suppression surrounding Ecuador’s banana industry (Grodman, 2020). Many food items composing a typical vegan diet follow the same trend—namely, production by the precariat at the edge of poverty to meet the demand of high-income consumers (i.e., the Global South/Global North divide). This makes veganism in Iceland—where fruits and vegetables need to be massively imported—a practice strongly entangled with issues of environmental and social justice.

A second problem concerns more directly the universality of the vegan ethical norm within Icelandic society. We anticipated that factors such as biological sex, age, and individual- and/or population-related dietary requirements challenge the universality of the vegan ethical norm. George (1990) provides a list of classes of individuals who are not required to be vegan,<sup>11</sup> namely,

- (1) infants and children, (2) gestating and lactating women, (3) older women and some older men, (4) allergic individuals and individuals who are predisposed to vitamin and/or mineral deficiencies, (5) undereducated individuals, (6) poor individuals, including people living in countries where selection of food is narrow and erratic, and (7) people who are genetically not predisposed for vegetarianism. (p. 175)

<sup>10</sup> See <https://oec.world/en/profile/bilateral-country/ecu/partner/isl> for data relative to the import of products from Ecuador to Iceland (Accessed 28 May 2022). The original dollar figure was converted to Euros on May 28, 2022.

<sup>11</sup> In the text, George is addressing vegetarians rather than vegans. However, the argument can be easily applied to vegans as well.

Assuming that legitimate reasons exist for why each of these classes of individuals is not required to be vegan, then Icelandic inhabitants falling within each of these classes should not be required to engage in a vegan diet. If this is true, then living in a highly developed, economically wealthy, and overall happy society is not a sufficient reason to abstain from animal products: a wealthy individual may in some circumstances be justified in consuming animal products. Moreover, another class of individuals germane to the Icelandic context are inhabitants of regions in Iceland that are located far away from the capital region, which is the shipping destination for the vast majority of the country's imported goods. High transportation costs and limited transportation logistics (especially in wintertime) make accessibility to vegan products difficult for inhabitants of towns such as Vopnafjörður, Húsavík, Akureyri, or Ísafjörður—all towns and villages located in remote parts of the island. In turn, this makes veganism in these regions very hard, if not impossible, not solely in terms of the final product cost but also in terms of the availability of products composing a healthy vegan diet. In other words, locality determines accessibility.

The discussion over who among the Icelanders is (and is not) morally obliged to follow the vegan ethical norm runs parallel to the question of what exactly this ethical norm demands beyond simply eschewing animal products. This is a difficult question to answer. Section 2 noted that it is hard to delineate with utter precision what exactly veganism demands, while Sect. 3 acknowledged that veganism is still a largely unexplored and undocumented phenomenon in Iceland. Combined, these factors prevent any strong inference on what veganism demands in the daily routine of an Icelandic as well as society overall. Nevertheless, one could infer possible demands of veganism based on its central tenet of abstention from using or otherwise consuming animal products. For instance, veganism would demand Icelanders to renounce traditional animal-based dishes, such as the Skyr (a traditional Icelandic dairy product), or a range of fish-based traditional meals; it would demand a dramatic change in dietary habits among Icelanders concerning chicken consumption, which is the most eaten type of meat; and it would also demand turning the fish-based vitamin D supplements, which are recommended and widely used in Iceland as well as around the Nordic hemisphere to complement the lack of sunlight, into vegan products. It would also heavily affect (if not hypothetically end) the fishing industry, which is one of the major business sectors in the country. This also implies that veganism would affect Iceland's overall economy or, at the very least, restructure it substantially. Moreover, veganism demands an increase in the import of products composing a vegan diet, particularly fruits and vegetables. As just discussed, this has several implications from a societal and environmental standpoint that cannot be utterly ignored. Notably, each of these points leaves several question marks open—which are beyond the feasibility of a single research article. The demandingness of veganism in Iceland is closely coupled with its impact, and foreseeing the impact of veganism on the country's economy and society remains a largely unexplored topic in the literature on veganism and sustainability.

Last, Iceland represents a particularly useful case study in discussing the challenge of causal impotence. The challenge questions the broader effects on the factory farming industry (and thus the harm inflicted on animals) that a single consumer may have when abstaining from animal-derived products. As a small country whose

population is largely concentrated within a delimited region and urban area (i.e., the capital area), it is feasible to envision individual local consumers impacting the local animal industry in a more direct and determining way than consumers in highly populated countries, such as European countries, the United States, or China. This is even more true for the livestock sector in general, as a solid animal-based industry is fundamentally nonexistent in Iceland. The livestock sector relies on traditional open-range farm systems that, in addition to not following many practices documented and condemned by vegan advocates, could be sensitive to the behavior, if not directly of single individuals, then at least of a relatively small portion of consumers. This segment of consumers could have an easier time establishing an impactful reach, with a discernible effect on the local animal industry.

What the future holds in regard to increased veganism in Iceland is hard to predict, although we see more emphasis on increasing the number of vegan food items in stores. Simultaneously, the Icelandic Dietary Survey shows a meagre increase in vegan participants. It will therefore be interesting to monitor the future trends of veganism in Iceland. In addition, there is an increase in people adopting vegetarian and flexitarian diets, which might lead to more people adopting the vegan diet. This is, however, only speculative, as the Icelandic vegan population is still very limited according to the Icelandic Dietary Survey—even in the capital area.

## Conclusion

Navigating the ethical challenges of veganism in the context of Iceland is a challenge in itself. We observed that veganism in Iceland is a largely unexplored phenomenon, and translating the universal ethical as well as societal, environmental, and health-nutritional challenges of veganism to this specific regional context necessarily requires further empirical studies. Indeed, there is currently no knowledge of Icelanders' perception or motivations for engaging in a vegan lifestyle, nor is there any study documenting veganism in remote regions of Iceland. The 2022 Icelandic Dietary Survey is the only official document reporting veganism in Iceland: with only a sample of 10 people for the survey, we believe the survey to be insufficient to formulate broader considerations about the phenomenon of veganism in Iceland and forecast its social as well as economic impact.

To address this research vacuum, our study aimed to provide preliminary work for initiating a discussion aimed at exploring veganism in Iceland more thoroughly. We noted not only that veganism *can* be problematized but that it *should* be—not to discourage this practice but to understand its broader implications for specific regional and national contexts beyond the implicit universality articulated in much of its current debates. We did so by selecting four major challenges to veganism that emerged in the ethics-oriented literature and discussed how each of these manifests in the Icelandic context. Our analysis showed that the particular demographic, geographic, and economic characteristics of Iceland make veganism a particularly difficult practice to achieve in an environmentally sustainable and socially sensible fashion—especially with respect to the current incapability of Iceland to maintain self-sufficient crop production, which implies a need for the import of virtually all products compos-

ing a vegan diet (particularly fruits and vegetables). The wealth-based argument for the claim of universality of the vegan norm does not seem to easily apply to certain classes of individuals defined by age, sex, or ethnicity but also by locality (i.e., inhabitants of remote regions of Iceland). This limits the number of individuals who are seemingly ethically obliged to follow a vegan diet, despite being, in principle, wealthy individuals. Moreover, the challenge of universality has broader implications of an environmental and social nature that generate further ethical issues for practicing veganism in Iceland. The challenge of demandingness poses a spectrum of changes to Icelandic society and economy that have yet to be thoroughly investigated. Nevertheless, one could reasonably speculate that the fishing and dairy industries would be severely impacted by a structural shift in the dietary regime toward veganism among Icelanders. This could potentially reshape the local economy in yet unforeseeable ways. We also noted that while the objection of causal impotence represents a major challenge in highly populated countries, the demographics of Iceland allow certain market thresholds to be reached more easily, thus enabling social changes more rapidly than in large societies where individual dietary choices have essentially no impact on the factory farming industry.

In terms of the broader conversation on veganism, we recognize that a case-by-case approach may be a better solution to frame discussions on this lifestyle and dietary practice. Veganism holds promise for environmental and social change in the food and agriculture sector in the face of dramatic anthropogenic modifications of the Earth, and many studies converge in stating that a vegan diet has an overall lesser environmental impact than an omnivore diet (Chai et al., 2019; Clark et al., 2019; Scarborough et al., 2014). To fully embrace this seemingly sustainable alternative, it first needs to be discussed and understood locally (i.e., a bottom-up approach) rather than by applying (if not forcing) universal categories to specific contexts (i.e., a top-down approach). In other words, veganism requires more contextualization.

Acknowledging the necessity of further exploring the phenomenon of veganism in Iceland, a major inference of our research is that a mixed diet may be more socially and environmentally sustainable than a vegan diet in Iceland. This inference is mainly corroborated by the environmental and social footprint of many of the fruits and vegetables imported to Iceland and by the self-sufficiency of the local dairy industry. However, this inference remains strongly conjectural insofar as a quantitative measure (e.g., CO<sub>2</sub> equivalent) needs to be taken into consideration for comparison, and further empirical studies addressing vegan practices in Iceland remain unaddressed. We can only encourage and advocate for additional research on veganism in Iceland to fully understand its challenges and, ultimately, its opportunities to address the global social and environmental predicaments of our time.

## Declarations

**Conflict of Interest** The authors have no competing interests to declare that are relevant to the content of this article.

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