Warsaw, 21 July 2024

To Whom It May Concern,

On behalf of the Green REV Institute, the initiator and coordinator of the largest coalition in Poland working towards a just transition of the food system, I would like to thank you for the opportunity to present our position on the challenges related to the resilience of the food system. The Green REV Institute undertakes advocacy, watchdog, and social activities in the area of food at the European, national, and local levels, conducting systematic analysis of challenges in the food and agriculture sector for various social groups: citizens, consumers, rural residents, people at risk of food poverty, farmers, and young people. At the same time, we point to possible systemic solutions, referring to existing and emerging policies and regulations that impact the building of resilient food systems. The report entitled "Building resilient food systems", which is to be developed, is particularly important to us as the food system and agriculture are globally inefficient and harmful, requiring special attention, decisive, bold actions, and proposing solutions at a global level. As experts in grassroots movement building, education, and mobilisation, knowing the value of civic actions for the repair of the food system, we believe that these solutions must be urgent, structural, and systemic.

kontakt@greenrev.org | Giordana Bruna 34 / box 5, 02-523 Warsaw, Poland
KRS 0000521182 | NIP 5213677634 | REGON 147376122

Table of contents

1. Background

Within the contemporary food system, we are faced with numerous risks and threats caused by inefficient and unjust actions by entities responsible for food, which affect many social groups. These risks and threats include, among others:

- antimicrobial resistance (AMR);
- decline in biodiversity, food safety, and food security threats;
- diseases of civilisation, diet-related diseases;
- inefficient direct subsidies, such as those under the largest EU policy, the Common Agricultural Policy (CAP);
- increase in emissions from the agriculture sector, particularly emissions from animal agriculture;
- subsidised promotion policies of unhealthy and environmentally harmful food;
- increasing malnutrition, hunger, and food poverty, both qualitative and quantitative;
- intensification of production and disproportionate growth of power among a few, several corporations;
- decline in the quality of life for people living near large-scale farms and the impacts of animal farms on local communities;
- increasing occurrence of extreme weather events such as droughts and floods, posing risks and challenges to farm operations;
- strengthening activities of interest groups from large meat, dairy, and egg companies, along with representatives of the animal agriculture sector;
- violation of labour rights of agricultural workers;
- climate migration driven by an intensifying climate crisis and pressure;
- food waste;
- pandemics and zoonoses;

- lack of regulations regarding the food environment, leading consumers to face advertising, promotions, lack of information, and thus purchasing unhealthy, unethical food, along with lack of access to healthy, local food;
- inefficient and unjust use of agricultural land.

By participating in the consultations, we want to:

- present the most important social groups that are currently exposed to the consequences of the lack of resilience in the food system,
- indicate policies, strategies, legislation, and actions that must be taken at the local, national, European, and global levels to build the resilience of the food system,
- point out the very troubling actions of the European Union in terms of weakening climate policies, including the Farm to Fork strategy, and emphasise the need for a holistic and thorough approach to evaluating the food system.

Qu Dongyu, Director-General of FAO, indicates that: "*A sustainable food system will be essential for achieving the goals of the Green Deal on climate, biodiversity, and other environmental objectives, while also improving the incomes of raw material producers and strengthening the EU's competitiveness*".

At the same time, during the opening of the 33rd Session of the FAO Regional Conference in Łódź in 2022, the Director-General of FAO, Qu Dongyu, mentioned that Poland's role in food production is increasing. It is worth noting that this growth is happening at the expense of consumers, people living in rural areas, and farmers. This growth is driven by the animal

agriculture sector, which is the main perpetrator of climate change, weakening the resilience of food systems, posing threats to food security, and working against a just food system.

According to the Safe & Just Plant Based Treaty 2023 report:

> *"Modern agriculture could thrive due to the stable climatic conditions and rich biodiversity of the Holocene. However, in the Anthropocene, our food system is a major driver of a risky trajectory, pushing Earth toward a radically different climatic state. It is clear that exceeding a 1.5°C warming dangerously brings us closer to the thresholds of Earth's climate-regulating systems. The world is already 1.2°C warmer than pre-industrial levels, and the fact that we are quickly approaching the 1.5°C threshold puts us at risk of rapid vegetation loss, biodiversity decline, intensified and exacerbated extreme weather events, and severe freshwater and food shortages. Without significant transformations across all sectors and scales, we risk irreversible changes to the Earth system as we know it.*
>
> *It is widely recognized that a profound transformation of our food system is necessary to achieve global food security while also meeting climate, biodiversity, and health objectives. The choices people make about the food they consume, how and where it is produced, and the extent of waste and loss have a profound impact on the well-being of both people and the planet. The global food system is the world's largest contributor to greenhouse gas emissions and is a major driver of biodiversity loss, terrestrial ecosystem degradation, excessive freshwater use, and waterway pollution due to excessive nitrogen and phosphorus use. It significantly impacts the stability of the Earth and the future of humanity (Rockström, 2020).*
>
> *Paradoxically, although the food system is currently a major source of environmental degradation and biodiversity loss, it is also one of the most affected by degradation. Transforming natural ecosystems into croplands and pastures, along with the*

consequences of agricultural pollution, severely threatens essential ecosystem functions that underpin agriculture itself. A complete transformation is necessary, encompassing changes in production, landscape management, and the entire food system. This is because all activities related to the food system, from agriculture, through processing, logistics, and retail, to consumption, affect planetary boundaries, thereby offering numerous opportunities for mitigation (Campbell, 2017; Clark, 2020)."[1] .

As the EIT Food Protein Diversification Think Tank report, Accelerating Protein Diversification for Europe (2023) points out: "*Currently, the food system contributes an alarming 26%-34% of greenhouse gas emissions and 78% of global ocean and freshwater eutrophication. However, there is an opportunity for change in the realm of food systems. By diversifying protein sources, we can not only strengthen our food systems, but also align with the EU's goals for a healthier, more sustainable, resilient and equitable food system with minimised environmental consequences. Diversifying protein sources entails reassessing and changing our production and consumption of protein sources, moving from a heavy reliance on resource-intensive animal proteins to more sustainable protein sources.*[2] "

The need to diversify proteins and adjust countries' policies was also identified in the UN Environment Programme's What's cooking report (2023):

"*Globally, food systems are responsible for about 30 percent of current anthropogenic greenhouse gas emissions causing climate change. Animal products - including animal emissions, feed, land use change and energy-intensive global*

[1] https://plantbasedtreaty.org/vegandonuteconomics/

[2] https://futurefood4climate.eu/wp-content/uploads/2024/04/EIT-Food-PDTT-Policy-Brief-Accelerating-Protein-Di versification-for-Europe.pdf

supply chains - account for almost 60 percent of food-related emissions, totalling 14.5-20 percent of global emissions.

The impact of increasing demand for animal-derived food (ASF) occurs in the context of unsustainable farming methods and over-consumption, especially in middle- and high-income countries. Overall, production and consumption contribute significantly to climate change, air and water pollution, biodiversity loss and land degradation.

While ASF is an important food source, high consumption of red and processed meat is associated with an increased risk of non-communicable diseases. ASF production is also associated with public health risks such as zoonoses and antimicrobial resistance, as well as animal welfare concerns.

New plant-based meats, cultured meats and fermented foods show potential for reduced environmental impact compared to many conventional ASFs. They are also promising in terms of reduced zoonotic disease risk and antimicrobial resistance and have the potential to significantly reduce animal welfare concerns associated with conventional animal agriculture.

There are many policy opportunities for governments to explore and support the potential of new alternatives, including support for (open access) research and commercialisation and just transition policies.

If supported by appropriate regulatory regimes and management instruments, new ASF alternatives can play an important role, probably with regional differences, in the transition to food systems that are more sustainable, healthier and less harmful to animals."[3] .

The scientific community agrees that building a resilient food system and guaranteeing the right to healthy, local food requires a transition to fully plant-based food systems for people. A plant-based transition of the food system is not only necessary, but also required for the well-

[3] https://futurefood4climate.eu/wp-content/uploads/2023/12/whats_cooking_frontiers.pdf.

being of people, animals and the planet. As Dr Peter Carter, IPPC expert, points out. *Global veganisation is now a survival imperative* .

2 Citizens. People in food systems

Citizens are a group that brings together consumers, young people, people in food poverty crises, people living near industrial animal farms, schoolchildren and the elderly.

Necessary actions in building a resilient food system primarily concern:

- food environment regulations
- collective catering regulations
- public procurement regulations
- changes in the disbursement of public funds to support agriculture
- regulations on the rights of consumers
- regulation of the use of antibiotics in animal agriculture
- the regulation of countries' fiscal policies
- regulation of international agreements
- regulations for the operation of factory farms, large-scale farms
- regulations in the field of education

Each of these actions must be taken at all decision-making levels, i.e. local, national, European, global.

2.1 Food environment

2023. Green REV Institute has undertaken an analysis of the activities of the largest retail chains in Poland, which include: Lidl, Biedronka, Żabka, Dino and Kaufland. We wanted to find out if and how the retail chains are actually working to reduce emissions from the food sector and build

access to healthy, local food. The *Meat us Half Way* report[4] is the result of analysis by the Green REV Institute. However, as a caveat, none of the aforementioned chains responded to the questions we posed.

The conclusions of the analysis are as follows:

- although all the retailers have sustainability strategies, none of them identifies measures to reduce the sale and promotion of meat and dairy as a target for climate action!
- all retailers indicate activities related to building a consumption of healthy and sustainable food in the activities related to shaping consumer behaviour and not to reducing environmental emissions!
- chains such as Lidl, Kaufland, Biedronka, Żabka boast about their plant-based products but do not show meat and dairy sales figures for plant-based substitutes!
- the chains rely on meat and dairy in their recipes. Only 13 % of all LIDL recipes are vegan, planet-friendly recipes according to Lidl are also those with dairy. In the case of

[4] https://en.futurefood4climate.eu/biblioteka/report-meat-us-half-way/

Biedronka, only 3 out of 10 recipes are fully plant-based. In the case of Kaufland, among all available recipes (939), 23, or 2%, are vegan.

- all the retailers focus on the development and use of renewable energy sources, the reduction of plastic packaging, but none mention emissions from animal agriculture.
- meat and dairy products are promoted in areas visible to consumers in chain stores.
- each of the chain's promotional newspapers contains several pages filled with promotions for the purchase of meat and dairy products.
- Żabka app encourages the purchase of meat and dairy sandwiches as high value snacks and breakfasts for school, citing the Green REV Institute and Future Food 4 Climate report on the low availability of sustainable meals in educational institutions from 2022.

and, as such, show that we need worldwide, restrictive regulation for global retail chains.

At the same time, due to the increasing and very strong position of retail chains, it is necessary:

a) Implement at the global level recommendations for sustainable network practices in the area of just pricing practices for local producers, shaping consumer behaviour through price promotions, advertising, commodity purchases, as well as through policies. against food waste and transparent food information to consumers. In addition, it is necessary to develop regulations for international agreements that protect and promote access to local food, limit food transportation so as to prioritise local, sustainable producers and farmers[5] . Regulations on funding for promotion and marketing are also necessary - currently the Common Agricultural Policy is still a funding tool for meat and dairy advertising, i.e. the effects of animal production. Funding as it stands must be ended. Similarly, regulations must be introduced for the advertising and marketing of animal products by retail chains. The marketing of animal products must be restricted and all advertising and promotions

[5] The controversy over the EU-Mercosur agreement shows that the interests of consumers and farmers must be protected at the level of international agreements.

in the food area must be checked for transparency, accuracy of information and the consumer's right to safe food.

b) At EU level, it is necessary to develop specific regulations, not just directives on sustainability and against *greenwashing* and *humane washing*.
c) At national level, it is necessary to implement existing EU directives, including the EU Corporate Sustainability Reporting Directive (CSRD).
d) At the local level, cooperation programmes in the area of support for local farmers and producers and education in the area of food and agriculture, including social campaigns, need to be implemented.

2.2 Collective nutrition

Collective nutrition is one of the key elements of a sustainable food system. Despite the planned publication of a draft regulation for a sustainable food system, such an initiative has unfortunately not been proposed at EU level in the 2019-2024 term. Food guidelines, standards and legislation vary from country to country, even though scientific knowledge about healthy food in institutions obliged to provide collective catering, such as hospitals, educational institutions, health care facilities or prisons, is widely available and should be applied and used to build a sustainable and resilient food system.

The Green REV Institute is advocating and campaigning for changes in the regulation of mass catering at EU level and in Poland. At EU level, the preparation and approval of a Sustainable Food System Framework is necessary. A sustainable food system regulation is essential to build resilience in the food system and strengthen the right to healthy, just food. This initiative would aim to ensure a sustainable EU food system and integrate sustainability into all food-related

policies. The proposed Regulation should set out the general principles, objectives, requirements and responsibilities of all actors in the EU food system, including establishing rules on:

1. sustainability labelling of food products,
2. minimum criteria for sustainable procurement,
3. on food management and monitoring,
4. in terms of collective catering.

At the national level, the Green REV Institute seeks to amend the Polish legislation, which in its current form significantly restricts access to plant-based food in mass catering establishments. We have called for an urgent amendment of the Regulation of the Minister of Health of 26 July 2016 on groups of foodstuffs intended for sale to children and young people in units of the educational system and the requirements to be met by foodstuffs used as part of the collective nutrition of children and young people in these units[6] .

The changes REV is calling for relate to ensuring access to fully plant-based meals in educational institutions for learners. Lack of access to vegan and sustainable diets is a serious challenge in the context of learner rights, action for a sustainable food system, climate, human and animal rights.

Ensuring the availability of plant-based food options in schools and the promotion of plant-based food in educational institutions is an essential part of the state's efforts to promote a sustainable food system, support environmental action and state climate responsibility. The 2022 study[7] on

[6] https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20160001154

[7] https://futurefood4climate.eu/biblioteka/dostepnosc-weganskich-posilkow-w-szkolach-badanie/

school meals in Poland conducted by the Green REV Institute and Future Food 4 Climate clearly indicate the need for reform in the area of mass catering.

> *"One of the main findings of the study is the lack of accessibility to nutrition per se at a level that meets the needs of learners. There are several main ways to address this systemic shortfall. Almost 80% (78.1%) of learners bring food from home, which, combined with the lack of opportunities to heat it up (no systemic solutions for this), means that the meals eaten are cold. 40% (40.6%) of learners use the offer of shops located near schools, which, combined with the ban on leaving school during teaching, also results in cold meals being eaten.* ***Most incompatible with healthy and balanced eating is the fact that almost 1/4 (24.2%) of the respondents do not eat any meal while at school.*** *Putting this into the shape of teaching activities in the Polish educational system, this means that some learners may spend as much as 8-10 hours at school without eating a wholesome meal".*

In the latest *Safe and Just Plant Based Treaty* report[8] , it is pointed out that an unhealthy diet is the leading cause of death worldwide and the leading cause of chronic disease (GBD, 2017; Diet Collaborators, 2019). The science website claims that there is "high agreement and robust evidence" that "a healthy diet requires dietary diversity, which requires greater crop diversity and agricultural biodiversity to support production. Increasing the production of more diverse foods can be beneficial for both improved nutrition and biodiversity" (DeClerck et al., 2023). Therefore, transforming the food system may be the greatest solution for both human and planetary health. This will require major policy changes and investments to implement food system transformation, such as the Farm to Fork strategy (Rockström et al., 2020, pp. 3-5).

It has also been shown that an increased supply of red and highly processed meat (4 or more portions per week) has a proven effect on increasing the risk of colorectal cancer, and that people

[8] https://plantbasedtreaty.org/vegandonuteconomics/

on vegetarian, vegan and pescatarian diets have a lower lifetime risk of cancer than those on a diet containing meat[9]. Furthermore, vegetarians and vegans have a statistically lower BMI than those on a meat-containing diet, which is a protective factor against diabetes[10] . In the Drivers for Food Security report[11] , the European Commission points out that as many as 58 million Europeans are ill because of food. "In the EU region, an estimated 59% of adults and about a third of children aged 5-9 years are overweight or obese and 23% are obese (OECD, 2019) and, perhaps counterintuitively, these also coexist with micronutrient deficiencies."

The consumption of unhealthy, nutrient-poor foods is an expression of qualitative food poverty. The health consequences and health costs of food poverty are enormous.

> "*Already one in three children is overweight, more often boys than girls. Nutritional deficiencies can also occur in those children who eat high-energy foods with low nutritional value at the same time. When they provide, through such a diet, an amount of energy that is excessive in relation to their needs, and at the same time have low physical activity, the accumulation of fat tissue in the form of excessive kilograms occurs. And thus, excessive body weight can be accompanied by nutrient deficiencies at the same time. This is then also a type of malnutrition resulting from vitamin or mineral deficiencies".* (Dr Katarzyna Wolnicka, National Institute of Public Health,

[9] Segovia-Siapco G, Sabaté J. Health and sustainability outcomes of vegetarian dietary patterns: a revisit of the EPIC-Oxford and the Adventist Health Study-2 cohorts. Eur J Clin Nutr. 2019;72(Suppl 1):60-70. doi:10.1038/s41430-018-0310-z

[10] Papier K, Appleby PN, Fensom GK, Knuppel A, Perez-Cornago A, Schmidt JA et al. Vegetarian diets and risk of hospitalisation or death with diabetes in British adults: results from the EPICOxford study. Nutr Diabetes. 2019;9(1):7. doi:10.1038/s41387-019-0074-0 and comments indicated therein:
Compared to regular meat eaters, low meat eaters, fish eaters and vegetarians were less likely to develop diabetes (risk ratio (HR) = 0.63, 95% confidence interval (CI) 0.54-0.75; HR = 0.47, 95% CI 0.38 -0.59 and HR = 0.63, 95% CI 0.54-0.74). These associations were significantly attenuated after adjusting for body mass index (BMI) (low meat eaters: HR = 0.78, 95% CI 0.66-0.92; fish eaters: HR = 0.64, 95% CI 0.51-0.80; and vegetarians: HR = 0.89 , 95% CI 0.76-1.05).

[11] https://futurefood4climate.eu/wp-content/uploads/2023/01/ui883g-SWD_2023_4_1_EN_document_travail_service_part1_v2.pdf

presentation by Dr Marta Czapnik - Jurak, 2nd Green REV Institute 2023 Forum on Food Safety)[12] .

The regulation of mass catering is important because of the health of its beneficiaries, their rights and also because mass catering builds demand for food. Moreover, to create food resilience, transition is needed at every level of production, distribution, consumption.

At the local level, as a comprehensive solution, we propose the Plant Based School Programme[13], developed with partners Parents for the Climate, the Rocket Oncology Foundation, the

[12] https://futurefood4climate.eu/wp-content/uploads/2023/11/Dr-Marta-Czapnik-Jurak.pdf

[13] https://roslinnaszkola.pl/

Ecological Thought Club, the Polish Council of NGOs, which aims to build resilient food systems while empowering citizens and consumers.

The postulates of the Programme, which can be implemented within the framework of the tools at the disposal of the individual local authorities, are as follows:

1. integrate food security objectives into urban development strategies. Urban policies must take into account the role of food and design actions for health, planet, human and animal rights.
2. cooperation of local authorities, exchange of good practices between local authorities on initiatives and projects on safe, sustainable and local food systems.
3. implementation in local government Cooperation Programmes of opportunities for community-based organisations to implement projects for healthy, local, ethical and climate-safe food.
4. introducing practical food education in schools, creating school vegetable gardens and plant-based cooking workshops, teaching respect for food, the environment and animal rights.
5. cooperation with nutritionists, education of teaching staff and canteen staff in the creation of menus based on current healthy eating recommendations and the prevention of food waste.
6. promoting a plant-based diet, organising meetings in schools, local activity centres, libraries, community centres.
7. to include the voice of local communities, parents, carers, learners, residents in the green transition to create a community for healthy, local and plant-based food.
8. development of community-supported agriculture; substantive, technical and financial assistance from local governments. Cooperation between local public institutions and local farmers.
9. introducing green procurement for food products ordered from schools. We focus on high-quality, local, seasonal, nutrient-rich food from certified producers.

10. guaranteeing full access to healthy, plant-based and whole-food meals in every school and every day (without the need to show a medical certificate).

The Plant Based School was developed on the basis of Polish regulations. It was supported by more than 40 councillors and decision-makers. The postulates of the Programme were supported in the Ombudperson's general address to the Ministry of Health[14] .

Cities around the world have already started to take action to build a sustainable food system. Such actions are being taken by cities across Europe. Edinburgh has passed a resolution in support of the Plant Based Treaty[15]. Edinburgh's plan includes actions led by Council teams (catering, libraries, communications, sustainability and culture). It also includes initiatives from external organisations, namely Edinburgh Community Food, Food for Life Scotland, Edinburgh International Conference Centre, Chamber of Commerce, University of Edinburgh, Heriot-Watt University and Creative Carbon Scotland. The planned activities are divided into key themes, including: awareness raising and capacity building; tackling food waste; and promoting plant-based food. In 2022. Edinburgh received silver accreditation from the Sustainable Food Places Network, with initiatives including the distribution of fresh meals to the most deprived sections of the community, the launch of a sustainable food catalogue and community food growing projects. All primary schools have one meat-free day a week and secondary schools provide 100% meat-free main meals one day a week. This is done as part of the Council's commitment to create menus that promote a balanced diet. Over the last 3 years the service has worked with

[14] https://futurefood4climate.eu/wp-content/uploads/2024/04/Do_MZ_zbiorowe_zywienie_wymogi_3_04_2024.pdf

[15] https://democracy.edinburgh.gov.uk/documents/b22429/Motions%20and%20Amendments%2017th-Jan-2023%2010.00%20Policy%20and%20Sustainability%20Committee.pdf?T=9&fbclid=IwZXh0bgNhZW0CMTAAAR1o3f3bcra5GdHjt2ZeePZe5TUcWU3Jdanpv4vUfqFEAykoUBJ6iehkPsM_aem_AaA8t-rK23i_IDQRJ0xNPflKoeSc7LV9puXhPbvZQcEFqEQby39DhOcYqslSzkkUo4Ny_7uMTGtCAdiorEFo5ZB

suppliers to increase spending on Scottish produce (66.8% of fruit and vegetables, over 80% of meat and 99.3% of dairy comes from Scotland)[16] .

Amsterdam has identified key areas in its food policy[17]: just and accessible food for all, tackling food waste, a healthy food environment, place-based agriculture and short supply chains, promoting plant-based food. Amsterdam's authorities are implementing measures together with organisations, the scientific community and residents so that the right to healthy food is realised.

One of the most important things cities can do as global climate leaders is to integrate nutrition strategies with existing climate action plans and interlinked programmes that address biodiversity, food poverty and community health. These strategies can also be integrated into other priority areas.

The regulation of mass catering is of paramount importance in the context of building resilient food systems and protecting different population groups from the risks associated with unhealthy, harmful food.

2.3 Public procurement

Green public procurement is a process whereby public bodies aim to procure goods, services and works with a lower environmental impact throughout the product life cycle, compared to products with the same functions that would normally be procured. Unfortunately, green public

[16] https://democracy.edinburgh.gov.uk/documents/b22429/Motions%20and%20Amendments%2017th-Jan-2023%2010.00%20Policy%20and%20Sustainability%20Committee.pdf?T=9&fbclid=IwZXh0bgNhZW0CMTAAAR1o3f3bcra5GdHjt2ZeePZe5TUcWU3Jdanpv4vUfqFEAykoUBJ6iehkPsM_aem_AaA8t-rK23i_IDQRJ0xNPflKoeSc7LV9puXhPbvZQcEFqEQby39DhOcYqslSzkkUo4Ny_7uMTGtCAdiorEFo5ZB

[17] https://www.amsterdam.nl/en/policy/sustainability/food-strategy/#h28d5599b-077b-b21b-a635-96e6a732896a

procurement has still not been implemented in most countries. EU regulations in this area are also not presented.

Green procurement has a significant impact on building resilience in the food system, contributing to sustainable development, protecting the environment and strengthening local economies.

Promoting sustainable agricultural production. Green procurement can stimulate demand for agricultural products from farms using sustainable agricultural practices. Such practices can include plant-based agriculture for human organic , agroecology, low-chemical-use crops and agro-forestry systems. This reduces pressure on natural resources and increases biodiversity, which contributes to more stable and resilient food production systems.

Supporting local and regional producers. By favouring local and regional suppliers in green public procurement, local economies can be strengthened and dependence on long supply chains reduced. The above can reduce the risk of supply disruptions caused by global crises such as pandemics, climate change or geopolitical conflicts. At the same time, we know from information obtained by the Green REV Institute that even in the case of the EU School Scheme (the social component of the Common Agricultural Policy), green procurement is not used for the purchase of fruit, vegetables and milk. We have analysed more than 500 menus of primary schools in Poland as part of collective catering and also in this case there are no elements of green public procurement.

Reducing emissions and reducing impact on climate change. By promoting the purchase of products and services with a lower carbon footprint and lower environmental impact, green procurement contributes to reducing greenhouse gas emissions. Reducing the impact on climate

change is key to ensuring the stability of agricultural production and avoiding extreme weather events that can disrupt food production.

Improving public health. Green procurement can promote the purchase of healthier and less processed foods, which can lead to improved public health. A healthier population is less vulnerable to pandemics and other health threats, which in turn strengthens the resilience of the food system.

Innovation and technology development. Green procurement can stimulate the development and implementation of new sustainable technologies in food production and distribution. These innovations can lead to more efficient use of resources, reduced waste and improved energy efficiency, which strengthens the overall resilience of the food system.

Increasing environmental awareness and education. Implementing green procurement can increase environmental awareness among consumers, producers and decision-makers. Education about sustainability and the benefits of green procurement can lead to more responsible choices and long-term behavioural changes.

In summary, green procurement supports sustainable production and consumption, reduces greenhouse gas emissions, supports local producers, promotes public health and stimulates innovation. All of this contributes to building more resilient and sustainable food systems capable

of facing future climate challenges. This is why the incorporation of green, sustainable procurement regulations into legislation at every level is so necessary.

2.4 Financial support for agriculture, the food system and building food resilience

Financial support systems for agriculture have a key impact on building resilience in the food system. Current subsidies negatively impact food security and climate change adaptation.

The report Safe and Just. Plant Based Treaty (2023) pointed out that:

> "Dietary *choices are shaped by many external factors, including prices (Darmon and Drewnowski, 2015), especially at a time when many countries are experiencing record inflation. Currently, animal-derived food is extremely heavily subsidised, artificially lowering the price of animal-derived food and making it difficult to switch to a plant-based diet. Therefore, there is an urgent need to redirect harmful subsidies and taxes in favour of plant-based foods with a lower environmental impact, in order to make them more affordable and accessible to the general public.*
>
> *Rockström's article 'Planet-proofing the Global Food System', published in Nature Food in 2020, states: "A recent assessment indicates that the 'hidden costs' of global food systems and land use are $12 trillion, compared to a market value of the global food system of $10 trillion. If current trends continue, these hidden costs could rise to more than $13 trillion a year by 2030. Not only is the planet subsidising the global food system at a level that probably exceeds its global market value, but the food system also receives huge direct subsidies from governments around the world" (Rockström et al., 2020).One Earth's 2023 study which analysed major EU and US agricultural policies between 2014 and 2020, found that only USD 41 million of public funds were spent on plant-based alternatives (0.1%) compared to USD 43 billion spent on meat and dairy (Vallone and Lambin, 2023 and Carrington, 2023). Cow farmers in the EU received at least 50 per cent of their income from direct subsidies. Animal agriculture farmers in the EU received 1,200 times more public*

funding and in the US 800 times more than groups producing plant-based meat substitutes and cellular meat.

Nearly $23 million per minute is spent on subsidies worldwide in animal agriculture and the fossil fuel industry, two major drivers of the climate crisis. The World Bank's 2023 report, Detox Development, says that trillions of dollars a year in fossil fuel, agriculture and fisheries subsidies are causing "environmental havoc", severely damaging the planet and "driving the degradation of the world's essential natural resources - clean air, land and oceans". According to the report, fisheries subsidies of $118 billion a year are a key factor in the exploitation of marine life, which has led the oceans into a "collective state of crisis". In addition, farm subsidies have been responsible for the destruction of 2.2 million hectares (5.4 million acres) of forest annually. Another FAO, UNDP and UNEP report found that 87% of global food subsidies are harmful to the environment and human health (FAO, UNDP and UNEP, 2021)."

At European level, a profound reform of the Common Agricultural Policy is needed. Currently, the Common Agricultural Policy supports animal agriculture production and the industrial animal agriculture sector. The Green REV Institute's AgriWatch programme consistently examines how public funds support the animal agriculture sector. The Common Agricultural Policy finances both feed crops, feed production, research and development investments, promotion of meat, dairy, as well as insurance subsidies. The exact amounts of CAP support for

the animal agriculture sector and animal agriculture production are subject to change. Under the CAP for 2021-2027, the total budget is around €387 billion, of which:

1. approximately 70% is earmarked for direct payments (around EUR 270 billion).
2. approximately 30% for rural development (around EUR 87 billion).

Some of these funds go directly to the animal agriculture sector, both through direct payments and rural development programmes.

The main recommendations developed jointly with expert individuals by the Green REV Institute include:

1. **changing the system of distribution of funds - both EU and national.** A large part of CAP funds is allocated to so-called direct payments, which are generally granted according to the agricultural area of the farm. **It is necessary to move away from area-based payments (direct payments) and to replace them with remuneration for the provision of public goods such as health and climate, i.e. 'public goods for public money'.** Instead of paying out per hectare of cultivation, all subsidies should be linked to the provision of services that bring wider benefits to society, such as climate, health or environmental action.
2. **it is necessary to** establish a common food policy for the sustainability of the whole food system and for animal welfare in the timeframe up to 2027. In general, The CAP should be seen as part of the common food policy, but it cannot do everything that is needed in terms of changes to the food system, as it can only address the supply side of the food system.
3. when designing the Common Agricultural Policy for 2028-2034, it should be ensured that sufficient funding for farmers will enable a transition to crop production for people.
4. scientific sources leave no doubt[18] that Europe needs to reduce the number of animals, which will, however, meet with public resistance. In the same way that the phasing out

[18] See the section of this paper entitled. "Consequences of not making changes".

of coal in the energy sector provides financial support for mining regions, the EU could use the CAP to create a fund to support regions with major animal agriculture riots in a similar way.

5. **small farmers are at a loss in the current system because they have to compete with intensive production on large-scale farms.** Their voice is not heard enough - not least because of the influence of large agricultural organisations such as COPA COGECA[19] , which usurp the right to represent the entire agricultural sector - while they stand primarily to protect their own interests.

In addition to reforming the Common Agricultural Policy, it is necessary to review all financial measures: national, promotion funds, European Programmes such as Horizon 2020, Life +, EU

[19] See https://www.politico.eu/article/copa-cogeca-farmering-lobby-europe/

Structural Funds, Cohesion Fund. The current system of subsidies unfortunately reinforces the climate crisis and environmental disaster.

2.5 Consumer rights

In line with the UN Guidelines for Consumer Protection, first adopted in 1985 and updated in 2015, the following standards provide a framework for consumer policy at international level:

1. protecting the health and safety of consumers: ensuring that products and services offered on the market are safe.
2. protection of consumers' economic interests: protecting consumers against unjust commercial practices.
3. access to information:providing consumers with adequate information to make informed decisions.
4. consumer education: promoting consumer education to increase consumers' awareness and knowledge of their rights.
5. environmental protection: promoting sustainable consumption and production to minimise negative environmental impacts.
6. legal and policy protection: supporting an appropriate legal and policy framework that protects consumer rights.

Unfortunately, the modern food system structurally violates consumer rights, particularly in the context of the right to health and safety.

In 2020. The Supreme Audit Office[20] carried out a study on the activities of food safety services, pointing out the dangers of food, especially food of animal production. The Supreme Audit Office (NIK) showed that: "*the food safety and quality assurance systems in place in Poland in*

[20] https://www.nik.gov.pl/plik/id,21927,vp,24594.pdf

2017-2018 require changes in the area of consumer protection against the consumption or purchase of products of insufficient quality".

In an audit on antibiotics[21] , the NIK in 2017 highlighted that: "*The results of the NIK audit indicate that antibiotics are widely used in animal farms. They were used by as many as 70 percent of animal breeders in the Lubuskie region covered by water and feed monitoring. In turkey and slaughter chicken farms, the percentage was even higher, exceeding 80 percent. In every case examined, the use of antibiotics was justified on therapeutic grounds. However, the gaps in supervision of this market are so serious that the official picture may not correspond to reality. Therefore, the NIK - without prejudging the legitimacy of the administration of antibiotics to animals on farms, or deciding whether the preparations were administered prophylactically or for legitimate therapeutic reasons - points out that the scale and extent of their use raises legitimate concerns about the impact this may have now and in the future*."

In June 2023, The Bureau of Investigative Journalism published the results of an investigation[22], revealing that a major supplier of meat to UK supermarkets was sourcing chicken that had been given antibiotics linked to the spread of deadly superbugs, increasing the risk of future outbreaks of life-threatening diseases. Polish meat giant SuperDrob used chickens from farms that use drugs classified as 'critical' to human health, despite the serious risks this poses to consumers. SuperDrob sold frozen poultry products to Lidl, Asda and Iceland. The company was linked to a deadly salmonella outbreak in 2020 - which, as revealed by TBIJ, the Guardian and ITV, involved multi-drug resistant bacteria. There were at least 15 salmonella infections linked to SuperDrob poultry in the following 18 months. 19 March this year. The Bureau of Investigative Journalism in its latest publication[23] pointed out that: "UK food safety authorities are considering

[21] https://www.nik.gov.pl/aktualnosci/nik-o-stosowaniu-antybiotykow-w-nbsp-hodowli-zwierzat-w-nbsp-woj-lubuskim.html
[22] https://www.thebureauinvestigates.com/stories/2023-06-20/polish-meat-giant-supplied-superbug-infected-chicken-to-uk-shelves/
[23] https://www.thebureauinvestigates.com/stories/2024-03-19/exclusive-uk-weighs-up-ban-on-polish-chicken-after-salmonella-surge/

a ban on imports of certain poultry products from Poland in response to rising salmonella infections. In a letter sent to the European Commission and Poland's Chief Veterinary Inspectorate in December 2023, officials expressed concern about the lack of action in controlling the disease in contaminated meat and eggs exported to the UK.

The letter, obtained by TBIJ and ITV News, highlighted an increase in salmonella cases linked to Polish poultry. **It lists six major outbreaks that have caused at least 2,680 human infections and several deaths in recent years. These are figures previously unrecognised by the UK government.**

The intervention by the UK's Food Standards Agency/ FSA came less than a year after a TBIJ and ITV investigation linked to a large supplier of chicken from Poland (Superdrob) found a link to the spread of antibiotic-resistant infections. This was soon followed by salmonella warnings in the UK and Europe. In December, the FSA advised consumers to "be cautious" when handling chilled and frozen chicken and turkey, as it was investigating a number of salmonella strains linked to Polish poultry products imported into the UK.

The European Food Safety Authority (EFSA) issued an alert, linking more than 330 human Salmonella cases in 2023 to contaminated poultry. Most of the contaminated samples came from Poland. **Young children and babies were among the sick, and victims were identified in Denmark, France, Ireland, Italy, the Netherlands, the UK and Austria, where one person died.**

Since the publication of the original TBIJ investigation in June 2023, chicken meat from Poland has been linked to more than 100 food safety alerts, most of which were related to salmonella.

Poland's Chief Veterinary Inspectorate said there is no conclusive evidence to indicate that products from Poland were the source of the three Salmonella outbreaks reported by the

European Alert System in 2023. Due to the different final producers, who in turn have their own meat suppliers, "the *involvement of other food operators as a source of infection cannot be confirmed or excluded*". - TNIJ reported. It added that the inspectorate complies with EU regulations on salmonella and antibiotic resistance and is cooperating with UK authorities in food poisoning investigations.

In pointing out the violation of the consumer's rights to safety and health protection, it is worth detailing a few facts:

1. in the European Union there is an excessive consumption of meat;
2. obesity, which is the other side of the coin known as food poverty, is a risk factor for many types of cancer, such as colorectal cancer, kidney cancer or breast cancer, among others;
3. eating a healthy diet, maintaining a healthy weight throughout life and being regularly active can protect against a number of cancers, including: a 69% reduction in the risk of oesophageal cancer, 63% reduction in cancers of the mouth, throat and larynx, 59% reduction in uterine cancer, 50% reduction in colorectal cancer, 47% reduction in stomach cancer and 38% reduction in breast cancer;
4. consumption of meat, dairy and eggs is one of the main causes of disease. Animal agriculture is responsible for high levels of red and processed meat consumption and contributes to heart disease, obesity, diabetes and cancer (Friel et al, 2009; Aston et al, 2012; Anand et al, 2015).
5. in 2015, the World Health Organisation stated that all processed meats are carcinogenic. This includes bacon, hot dogs, sausages, ham, and all processed meats. Studies have linked dairy to prostate cancer and increased risk of lung, breast and ovarian cancer in

people with lactose intolerance. Studies have long shown that vegans are less likely to suffer from certain types of cancer.

6. less than 10 % of the world's population lives in Europe, but it accounts for a quarter of all cancer cases, cancer is the second leading cause of death in Europe, the leading cause of death from disease in children over one year of age;
7. the number of diagnosed cases is increasing, primarily due to increased life expectancy resulting in an ageing population;
8. cancer highlights social injustice and inequality in healthcare, as differences in cancer survival rates between EU Member States exceed 25 %;
9. EU citizens have unequal access to prevention, protection from risk factors, education on healthy habits and resources to protect themselves from misleading information;
10. after recovery or in remission, EU citizens have unequal opportunities to return to work, to be financially independent and to return to a harmonious family, social and emotional life;
11. class and gender are important factors and causes of inequality and injustice at all stages of the disease.

Building a resilient food system based on plant-based, local, healthy food is a strengthening of consumer rights and an action to improve the quality of life and health of people.

Equally important is the aspect of access to information. In the current food system, the consumer is deprived of access to information on the origin, production method, use of plant protection

products, hormones and antibiotics in production. It is necessary to systematically secure the interests of consumers in this area.

2.6. Use of antibiotics in animal animal agriculture

According to the World Health Organisation:

> "*Antibiotic Microbial Resistance (AMR) threatens the effective prevention and treatment of an increasing number of infections caused by bacteria, parasites, viruses and fungi.*
>
> *Antimicrobial resistance occurs when bacteria, viruses, fungi and parasites change over time and no longer respond to drugs, making it difficult to treat the infection and increasing the risk of the spread of disease, severe illness and death. As a result, drugs become ineffective and infections persist in the body, increasing the risk of spreading to others.*
>
> *Antimicrobials - including antibiotics, antivirals, antifungals and antiparasitics - are drugs used to prevent and treat infections in humans, animals and plants.*

Microorganisms that develop resistance to antimicrobials are sometimes referred to as 'superbugs'[24] .

Unfortunately, the problem is usually overlooked in the public debate and we very rarely hear about the risks of antibiotic resistance in the context of food safety.

Antibiotic resistance data show how important the topic of AMR is to the health debate.

The World Health Organisation[25] indicates that:

a) Antimicrobial resistance (AMR) is one of the biggest global threats to public health and development. AMR in bacteria is estimated to have been directly responsible for 1.27 million deaths worldwide in 2019 and contributed to 4.95 million deaths;
b) inappropriate and excessive use of antimicrobials in humans, animals and plants is a major factor in the development of drug-resistant pathogens.
c) AMR affects countries in all regions and at all income levels. Its drivers and consequences are compounded **by poverty and inequality,** with low- and middle-income countries being the most affected.
d) antimicrobial resistance threatens many of the achievements of modern medicine. It makes treatment of infections more difficult and makes other medical procedures and treatments - such as surgery, caesarean sections and cancer chemotherapy - much riskier.
e) the world is facing an antibiotic access crisis. With increasing levels of antibiotic resistance, research and development is inadequate and additional resources are urgently needed to ensure equitable access to new and existing vaccines, diagnostics and medicines.
f) in addition to death and disability, antimicrobial resistance has significant economic costs. The World Bank estimates that AMR **could result in additional healthcare costs**

[24] https://www.who.int/health-topics/antimicrobial-resistance
[25] https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance

of US$1 trillion by 2050 and gross domestic product (GDP) losses of US$1 trillion to US$3.4 trillion per year by 2030.

g) priorities in the fight against antimicrobial resistance in human health include preventing any infections that may result in the inappropriate use of antimicrobials; ensuring universal access to high-quality diagnostics and appropriate treatment of infections; and strategic information and innovation, for example surveillance of antimicrobial resistance and antimicrobial consumption/use, and research and development for new vaccines, diagnostics and medicines.

July 2022. The Commission together with Member States identified AMR **as one of the three most serious health threats in the EU It is** estimated that more than 35,000 people in the EU/EEA and more than 1.2 million people worldwide die each year as a direct result of infection with antibiotic-resistant bacteria. If authorities and countries do not take further action, the number of AMR deaths worldwide could reach more than 10 million per year by 2050, more than the expected number of deaths from cancer and diabetes combined, which could cause economic damage as catastrophic as the 2008-2009 global financial crisis[26] .

"In Poland in 2019, there were 5 600 deaths attributed to antimicrobial resistance and 24 100 deaths related to antimicrobial resistance. Poland has the 46th lowest age-standardised antimicrobial resistance-related mortality rate per 100 000 population in 204 countries. The number of deaths due to AMR in Poland is higher than the number of deaths due to neurological diseases, digestive diseases, diabetes

[26] European Parliament resolution of 1 June 2023 on EU action against antimicrobial resistance (2023/2703(RSP).

and kidney diseases, respiratory infections and tuberculosis and chronic respiratory diseases"[27] .

The European Antimicrobial Resistance Surveillance Network[28] (EARS-Net) is the largest publicly funded antimicrobial resistance (AMR) surveillance system in Europe. EARS-Net data play an important role in raising awareness at the political level, among public health institutions, in the scientific community and among the general public. Polish institutions belonging to EARS - Net are the National Institute of Medicines and the National Reference Centre for Microbial Drug Susceptibility. WHO monitors antibiotic resistance and antibiotic use through the *GLASS - Global Antimicrobial Resistance and Use Surveillance System* programme[29] .

In Poland, EARS-Net monitoring includes laboratories from all over the country performing microbiological diagnostics for selected university, provincial and district hospitals. The data collection is financed by funds at the disposal of the Minister of Health as part of the implementation of the task 'Counteracting the emergence of antibiotic resistance in microorganisms' of the National Health Programme 2021-2025 and coordinated by the National Reference Centre for Microbial Drug Susceptibility operating at the National Institute of

[27] https://www.healthdata.org/sites/default/files/files/Projects/GRAM/Poland_0.pdf

[28] https://www.ecdc.europa.eu/en/about-us/networks/disease-networks-and-laboratory-networks/ears-net-data

[29](https://www.who.int/initiatives/glass

Medicines in Warsaw. The 2021 data were submitted by 52 laboratories and included tests performed in 60 hospitals across Poland.

For many years, monitoring of antibiotic resistance and antibiotic use in medicine has been carried out in Europe by the European Centre for Disease Prevention and Control (ECDC).

In 2022, a joint WHO and ECDC report on antibiotic resistance monitoring in Europe was published for the first time.

Key findings from the report 'Antibiotic resistance monitoring in EARS-Net and WHO GLASS in Poland - 2021 data'. [30]:

- in Poland, an increase in reported isolates from blood cultures was observed in 2021 compared to 2020 data, indicating a return to the situation observed in the years prior to the SARS- Cov-2 epidemic. **The greatest increase of 120% was observed for Acinetobacter spp, by 72% for E. faecium, by 40% for P. aeruginosa, by 58% for E. faecalis, by 57% for S. pneumoniae, by 32% for K. pneumoniae, by 18% for S. aureus and by 9% for E. coli.**
- more than doubled the carbapenem resistance rate in Klebsiella pneumoniae from 8.2% in 2020 to 19.5% in 2021, indicating an uncontrolled spread of carbapenemase-producing K. pneumoniae strains. Immediate infection control and prevention measures should be taken to halt this trend.
- in the current situation, it is essential to carry out actions to limit the build-up of carbapenem resistance in K. pneumoniae and Acinetobacter spp. and vancomycin

[30] https://korld.nil.gov.pl/wp-content/uploads/2023/03/Raport-EARS-Net-2021-1.pdf

resistance in E. faecium. Such actions should be long-term and coordinated, taking place at different levels, following a **"One Health"** approach[31] **.**

According to the report Antimicrobial resistance surveillance in Europe 2022[32], Poland is characterised by:

a) weak[33] multi-sectoral cooperation and coordination in the One Health area;
b) lack of a developed AMR action plan;
c) poor infection prevention, and poor control in healthcare.

The study 'Antibiotic resistance in Poland and Europe in 2021 - EARS-Net data'[34] summarises the results of the above reports as follows:

"*Poland is among the countries with the highest percentage of E. coli resistance to fluoroquinolones, with only Cyprus, Greece and Bulgaria recording higher values. Resistance to third-generation cefa- losporins, the main group of drugs for the treatment of infections caused by this bacterial species, remains at 18.7%, ranking Poland above the population-weighted European average of 13.8%. Resistance of the MDR type (resistance simultaneously to third-generation cephalosporins, fluoroquinolones and aminoglycosides) was 10.2 per cent in Poland, double the population-weighted European average of 5.1 per cent. This places our* ***country***

[31] One Health / One Health is the term used to describe the principle that recognises that human and animal health are interlinked, that diseases are transmitted from humans to animals and vice versa, and therefore must be managed in both. The One Health approach also includes the environment, another link between humans and animals and a potential source of new resistant micro-organisms. The term is recognised worldwide and is widely used in the EU and in the 2016 UN Political Declaration on Antimicrobial Resistance.

[32] https://www.ecdc.europa.eu/sites/default/files/documents/ECDC-WHO-AMR-report.pdf

[33] in the report, the lowest rating is poor - poor.a

[34] https://antybiotyki.edu.pl/wp-content/uploads/Biuletyn/Biuletyn-Informacyjny-2_2022.pdf

among the countries with the highest percentage of MDR, *just after Bulgaria, Greece, Cyprus and Slovakia"*[35] .

Poland - antibiotics on sale and use in animal production

Poland is using more and more antibiotics for animal agriculture production, while the rest of the European Union countries are limiting them. In 2022, Poland's antibiotic consumption per kilogram of body weight (mg/CPU), was 196 mg, up 55 per cent from 2011 levels. Meanwhile, in Europe's largest meat producer, Spain, consumption was 127 mg, down by as much as 65 per cent. The Netherlands started from a similar level of antibiotic consumption to Poland (113 mg), but reduced it by 67 percent to 37 mg. Germany, also a major animal agriculture producer, reduced its use of medicines by 64 percent from 211 mg to 70 mg. The Czechs had already outperformed Poland a decade ago (83 mg), but still reduced their use by almost half, to 46 mg. France, the third largest animal producer in Europe, started with a score of 114 mg to reduce antibiotic use in animal animal agriculture by 65 per cent, to 38 mg/PCU.[36]

The European Medicines Agency (EMA) launched a project on the use of antibiotics in animal agriculture in September 2009 at the request of the European Commission to develop

[35] https://antybiotyki.edu.pl/wp-content/uploads/Biuletyn/Biuletyn-Informacyjny-2_2022.pdf

[36] https://www.rp.pl/przemysl-spozywczy/art39788921-antybiotyki-w-miesie-inni-ograniczaja-w-polsce-coraz-wiecej

a harmonised approach to the collection and reporting of data on the use of antimicrobials in animals from EU Member States and the European Economic Area (EEA).

The ESVAC project formally came to an end in November 2023 with the publication of the final report.

From January 2024, all EU/EEA Member States must report their data on the volume of sales and use of antimicrobial medicinal products in animals, in accordance with the Veterinary Medicinal Products Regulation.

The report 'Sales of veterinary antimicrobials in 31 European countries in 2022'.[37] indicated that:

- Aggregate VMP antibiotic sales for all 31 reporting countries in 2022 were 73.9 mg/PCU. This represents a decrease of 12.7% compared to 2021. (84.7 mg/PCU). There is still a large difference between the countries with the highest and lowest sales, ranging from 2.1 mg/PCU to 254.7 mg/PCU;
- The best-selling class of antibiotics was penicillins, which accounted for 32.7% of total sales (24.2 mg/PCU). Together with tetracyclines (17.4 mg/PCU, 23.5%) and sulphonamides (6.9 mg/PCU, 9.4%), these 3 classes accounted for 65.5% of total sales in 2022. Overall, the sales patterns of the different classes of antibiotics varied significantly between the 31 countries. This was also true for the EMA AMEG Category B antibiotic classes for which restriction of use is recommended - i.e. cephalosporins of the 3rd and 4th generation, fluoroquinolones, other quinolones and polymyxins - whose sales ranged from <0.01 to 0.47 mg/PCU, <0.01 to 12.6 mg/PCU, 0 to 0.75 mg/PCU and 0 to 10.2 mg/PCU; accounting for 0.17%, 2.8%, 0.16% and 2.8% of total aggregate sales, respectively. **WHO considers these classes, in addition to macrolides and ketolides, to be critically important antimicrobials (CIAs) of the highest priority for human**

[37] https://www.ema.europa.eu/en/documents/report/sales-veterinary-antimicrobial-agents-31-european-countries-2022-trends-2010-2022-thirteenth-esvac-report_en.pdf

medicine (WHO 'Critically Important Antimicrobials for Human Medicine, 6th revision');

- In 2022, Poland used 838 tonnes of antibiotics for food-producing animals, higher was only Spain with a score of 1.02 thousand tonnes. But Spain uses less of these drugs, as it has a result of 127.4 mg/PCU per kilogram, while Poland has as much as 196 mg/PCU.

The data in Poland were obtained in accordance with national pharmaceutical law - it is the wholesalers who are obliged to provide data on sales of veterinary medicinal products. Sales data are collected from wholesalers who supply veterinary medicinal products directly to veterinarians. Wholesalers complete a template with quarterly sales data.

Supreme Audit Office

In 2017. The Supreme Audit Office conducted an audit on the use of antibiotics in animal agriculture in Lubuskie Province.

> "*The results of the NIK audit indicate that antibiotics are widely used in animal farms. They were used by as many as 70 percent of animal breeders in the Lubuskie region covered by water and feed monitoring. In turkey and slaughter chicken farms, the percentage was even higher, exceeding 80 per cent. In every case examined, the use of antibiotics was justified on therapeutic grounds. However, the gaps in supervision of this market are so serious that the official picture may not correspond to reality. Therefore, NIK - without prejudging the legitimacy of the administration of antibiotics to animals on farms, or deciding whether the preparations were administered prophylactically or for legitimate therapeutic reasons - points out that*

the scale and extent of their use raises legitimate concerns about the effects this may have now and in the future."[38] .

Even then, the NIK indicated that:

- "*Precise* ***data on the use of antibiotics in animal animal agriculture is not available to the Ministry of Agriculture.*** *The Ministry only has data (provided by pharmaceutical wholesalers) on sales of veterinary medicinal products (including antimicrobial substances, i.e. antibiotics, among others). These data show that sales of veterinary antibiotics have steadily increased in recent years (from 475 tonnes in 2011 to 582.5 tonnes in 2015) and that more than 70 percent of veterinary antibiotics sold in Poland during this period were, as in other EU countries, older generation antibiotics (tetracyclines, penicillins and sulphonamides*)." ,[39]
- "*Reliable data on the scale, scope and type of antibiotics used in animal production were also not available to the inspected Inspection Authorities, and fragmentary information in this respect was only revealed in documentation from individual inspections. This situation was influenced by conditions essentially beyond the control of the inspected inspection bodies, i.e.: the lack of a nationwide platform/database on the use of*

[38] https://www.nik.gov.pl/plik/id,16217,vp,18741.pdf
[39] This is due to change from 2024 ; ibid.

antibiotics or the obligation to report the use of antibiotics to the supervisory *authorities*"[40] .

In its recommendations for the 2024 audit plan of the Supreme Audit Office, the REV emphasised that the Supreme Audit Office must continue its audits in the area of antibiotic use in animal agriculture and cover all provinces.

AgriWatch - Green REV Institute

The Green REV Institute addressed the Ministry of Agriculture and Rural Development twice on the use of antibiotics in animal agriculture, due to worrying reports on chicken meat from Poland, as part of the Green REV Institute's AgriWatch programme.

A recent reply from the Ministry of Agriculture and Rural Development regarding the implementation of legislation in the area of antibiotic use control confirmed that Poland has still not implemented one of the EU Regulations on counteracting antibiotic resistance:

"*Regulation 2019/4*[41] *was implemented into the Polish legal order by the Act of 1 December 2022 amending the Feed Act and the Waste Act (Journal of Laws of 2022, item 2722).* ***In Poland, however, the scope of Regulation 2019/6***[42] ***covers the competences of both the Ministry of Agriculture and Rural Development and the Ministry of Health. The work on the law implementing the provisions of the aforementioned regulation in the Polish legal order has so far been coordinated in***

[40] Ibid.

[41] Regulation (EU) 2019/4 of the European Parliament and of the Council of 11 December 2018 on the manufacture, placing on the market and use of medicated feed amending Regulation (EC) No 183/2005 of the European Parliament and of the Council and repealing Council Directive 90/167/EEC (OJ EU L 4/1, 7.1.2019)

[42] Regulation (EU) 2019/6 of the European Parliament and of the Council of 11 December 2018 on veterinary medicinal products and repealing Directive 2001/82/EC (OJ EU L 4/43, 7.1.2019), https://eur-lex.europa.eu/legal-content/PL/TXT/HTML/?uri=CELEX%3A32019R0006

Poland by the Ministry of Health in cooperation with the Ministry of Agriculture and Rural Development. In 2023, this work was halted due to elections to the Sejm and Senate of the Republic of Poland. Currently, work on the law in question must be restarted. Arrangements between the two ministries regarding the plans for this work are ongoing."

In addition, the Ministry indicated that the first report on the use of antimicrobial medicinal products in animals must be submitted by Member States to the EMA by 30 September 2024. This report will contain data on antimicrobial medicinal products used in the previous calendar year in specific categories of breeding cattle, pigs and poultry. This is a very important change related to the reporting of antibiotic use and application - until now, data was obtained from veterinary wholesalers on the basis of sales information and not data on the actual use of drugs in the animal agriculture sector in Poland.

The Ministry of Agriculture and Rural Development also indicated in its response the activities it is carrying out and planning to counter antibiotic resistance:

"*Currently, a **National Action Plan** for the reduction of risks to animal and public health associated with the use of antimicrobials in veterinary medicine is being developed within the Ministry's Team for Combating Antimicrobial Resistance in Veterinary Medicine. The plan will encompass activities, including monitoring, promotion and education, and is based on cooperation between different institutions. Some of the actions envisaged in the proposed Plan have already been implemented. These include control and monitoring of the use of antimicrobials in veterinary medicine, including: monitoring of antimicrobial resistance, monitoring of sales of veterinary medicinal products, including antimicrobial veterinary medicinal*

products, monitoring of residues of, inter alia, antimicrobials in food of animal origin, and monitoring of water intended for drinking to animal agriculture.

In addition, taking into account the risk of increasing antibiotic resistance, the Ministry, in cooperation with the Chief Veterinary Officer, the State Veterinary Institute - PIB, the Institute of Zootechnics - PIB and the scientific community, has been taking and developing measures over the years to counteract this phenomenon by raising awareness of the prudent use of antimicrobials, including antibiotics.

Raising public awareness and knowledge of the risk of developing antimicrobial resistance through education, communication and training is being carried out, among others, by the Agricultural Advisory Centres, which are providing training to farmers on the above-mentioned topics from 2019. From 2024 onwards, within the framework of the ecoscheme "Animal welfare" (I.4.6) included in the NP for the CAP 2023-2027, training of farmers on animal agriculture and breeding methods used in animal agriculture production aiming at reducing the use of antibiotics will start. These activities will continue".

In relation to the above answer, it is worth establishing:

a) what stage is reached in work on the National Action Plan to reduce risks to animal and public health associated with the use of antimicrobials in veterinary medicine,
b) what are the results of the measures already implemented, i.e. controls and monitoring on the use of antimicrobials in veterinary medicine including: monitoring of antimicrobial resistance, monitoring of sales of veterinary medicinal products including antimicrobial veterinary medicinal products, monitoring of residues of, inter alia,

antimicrobials in food of animal origin, and monitoring of water intended for drinking to animal agriculture?

c) the fundamental question of what stage is reached in work on the implementation of the law **implementing the provisions of the EU regulation in the Polish legal order**[43] **.**

EU actions and implementing acts

The European Union identifies antibiotic resistance as one of the threats to public health and society.

In June 2017. The European Commission adopted the 'One Health' European Action Plan against AMR[44], as requested by EU countries in the Council Conclusions[45] on 17 June 2016. the main objectives of the plan are based on three pillars:

1. EU recognition as an area of best practice
2. support for research, development and innovation
3. shaping the global agenda.

The plan presents more than 70 actions covering human and animal health as well as the environment. As part of the implementation of this action plan, the Commission has adopted EU guidelines on the prudent use of antimicrobials in humans[46]. These guidelines aim to reduce the inappropriate use of antimicrobials and promote the prudent use of antimicrobials in humans.

[43] Regulation (EU) 2019/6 of the European Parliament and of the Council of 11 December 2018 on veterinary medicinal products and repealing Directive 2001/82/EC (OJ EU L 4/43, 7.1.2019.

[44] https://health.ec.europa.eu/document/download/353f40d1-f114-4c41-9755-c7e3f1da5378_pl?filename=amr_2017_action-plan.pdf

[45] https://www.consilium.europa.eu/en/press/press-releases/2016/06/17/epsco-conclusions-antimicrobial-resistance/

[46] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52017XC0701(01)

The guidelines are addressed to all those responsible for the use of antimicrobials. They are complementary to EU guidelines on the prudent use of antimicrobials in animals[47] .

In the period between the adoption of the 2017 Action Plan and the adoption of the Commission's proposal for a Council Recommendation on stepping up EU action against antimicrobial resistance under the One Health approach, several initiatives played an important role in strengthening the EU's response to antimicrobial resistance.

These include:

1. EU strategic approach to pharmaceutical substances in the environment
2. Farm to Fork strategy
3. action plan to eliminate pollution
4. Regulation (EU) 2019/6 of the European Parliament and of the Council on veterinary medicinal products
5. Regulation (EU) 2019/4 of the European Parliament and of the Council on medicated feedingstuffs
6. Commission Implementing Decision (EU) 2020/1729
7. pharmaceutical strategy for Europe.

It is Regulation (EU) 2019/6 of 11 December 2018 on veterinary medicinal products and repealing Directive 2001/82/EC that is relevant to activities related to protection against

[47] https://health.ec.europa.eu/document/download/190841e8-5975-4390-a304-908c259592ab_pl?filename=2015_prudent_use_guidelines_pl.pdf

antibiotic resistance and it is this Regulation that has not been implemented in the legal order of Poland and many EU countries. The provisions of the Regulation stipulate, inter alia, that:

1. "*Antimicrobial medicinal products must not be used routinely or used to compensate for poor hygiene, poor animal agriculture, lack of care or inadequate farm management.*
2. *Antimicrobial medicinal products must not be used in animals to promote growth or enhance performance.*
3. *Antimicrobial medicinal products shall not be used prophylactically other than in exceptional cases in individual animals or in a limited number of animals when the risk of infection or infectious disease is very high and the consequences could be* severe"[48] .

Antibiotic resistance is a challenge for all of us and threatens all of us: the consuming public, people in food poverty, consumers of food of animal origin. The consequences of consuming foods that contribute to antibiotic resistance affect entire societies, health and people's lives. The consequences of antibiotic resistance also affect people living in the vicinity of so-called industrial farms, i.e. industrial animal farms (large-scale farms).

> "It *is estimated that more than 35,000 people die each year in the EU/EEA as a direct result of an infection caused by antibiotic-resistant bacteria. The health impact of antimicrobial resistance is comparable to that of influenza, tuberculosis and HIV/AIDS combined. Overall, recent data show significantly increasing trends in the number of infections and deaths attributed to almost all combinations of bacterial and antibiotic resistance, especially in healthcare settings. It is estimated that around 70% of infections with antibiotic-resistant bacteria are healthcare-associated. In addition, the impact that fungicide-resistant fungi have on health has become clearer over time.*
>
> *Antimicrobial resistance has serious human health consequences and economic implications for healthcare systems. By reducing the ability to prevent and treat*

[48] https://eur-lex.europa.eu/legal-content/PL/TXT/HTML/?uri=CELEX%3A32019R0006#d1e6738-43-1

infectious diseases, antimicrobial resistance threatens the ability to perform surgery, treat immunocompromised patients, organ transplantation and cancer therapy, among others. It results in high costs for the healthcare systems of EU/EEA countries. Antimicrobial resistance also poses a threat to food safety and food security as it affects animal health and production systems.

"Antimicrobial resistance is an issue that is part of the 'One Health' approach, meaning that it encompasses ***human health, animal health, plant health and the environment, and*** *is a multifaceted cross-border health threat that cannot be tackled by a single sector or a single country. Combating antimicrobial resistance requires a high level of cooperation between sectors and countries, including at the* global *level."*[49] .

In the White Paper animal agriculture Sector: Stench, Blood and Tears (2022) Dr. Sylwia Spurek, former Deputy Ombudsperson, MEP 2019-24 pointed out the issues surrounding the presence of antibiotics on and around farms:

"*A number of pathogenic and potentially pathogenic (opportunistic) bacteria have been identified in studies conducted on farms. Alert bacteria (MRSA, ESBL) and ESKAPE bacteria (Enterococcus faecium, Staphylococcus aureus, Klebsiella pneumoniae, Acinetobacter baumannii, Pseudomonas aeruginosa and the genus Enterobacter) should be mentioned as the most relevant for public health. They are natural colonisers of humans and animals (part of their microbiota) or are commonly found in soil and aquatic environments. Bacteria of concern in the animal animal agriculture environment are: animal agriculture-associated methicillin-resistant Staphylococcus aureus (LA-*

[49] https://eur-lex.europa.eu/legal-content/PL/TXT/?uri=CELEX:32023H0622(01).

MRSA) and strains of Enterobacteriaceae producing enzymes called lactamases, which decompose antibiotics of the ß-lactam class, so-called ESBL.

MRSA pathogens present in bioaerosol emitted by farms can be carried by the wind at distances of 10 to 1 000 m. Importantly, MRSA are capable of surviving in organic dust for up to 2 months.

ESKAPE bacteria are the six pathogens that are the most common causes of hospital-acquired infections worldwide and are responsible for the majority of life-threatening bacterial infections in critically ill and immunocompromised patients and patients in hospitals. They are characterised by a high incidence of mulantibiotic resistance linked to their ability to exchange drug resistance genes with other microorganisms in order to successfully adapt to their new environment. Resistance and mulantibiotic resistance to almost all available antibiotics is causing a dramatic increase in cases of ineffective treatment of these infections."

Other bacteria - also posing a risk to humans - are present in chicken farms. These include the genera Campylobacter, Salmonella, Listeria and Yersinia. All readily acquire antibiotic-resistant and mulantibiotic-resistant characteristics. These bacteria cause acute gastroenteritis and campylobacteriosis, or acute gastroenteritis, in humans. The specific vector of the bacteria is insects, especially houseflies. In a study on the transmission of bacteria and antibiotic resistance from chicken farms to the environment by houseflies, it was shown that these insects carry a wide variety of bacteria, including those that can be opportunistic human pathogens: Enterococcus, Staphylococcus, Pseudomonas, Campylobacter and Klebsiella. Flies living in the environment of cow and bull farms have also been shown to carry antibiotic-resistant S. aureus and ESBL.

Studies have shown that zoonotic strains of MRSA are transmitted between pigs, male and female pig workers and their families, and that people living near farms are more likely to be carriers of the bacteria. Importantly, it has been shown that the determinant of carriage is not direct contact with animals, but exposure to bioaerosols. The risk of

infection is related to the organic dust emitted and contaminated tools carried from the farm premises, workers' clothes or vehicles transporting the animals.

According to Dr. Anna Kozajda, male and female residents in the vicinity of the farms usually do not note bioaerosol and antibiotic-resistant bacteria as a threat to their health"[50] .

Researchers from the University of Warmia and Mazury are working on a report on environmental pollution from animal farms and the impact of this pollution on human health.

"The largest group of organic pollutants emitted by intensive poultry farms in Poland are pharmaceuticals. - Although the use of antibiotics is regulated, the scale of their consumption is not fully known. Consumption reports are based on sales values, which are obtained from pharmaceutical companies. In soils, scientists have shown the presence of enrofloxacin, ciprofloxacin and trimethoprim - broad-spectrum antibiotics, among others. - Antibiotics present in the environment, even in low concentrations, contribute to the spread of antibiotic resistance, thereby affecting human health. Even in low concentrations, they can affect the composition of the soil and plant microbiome"[51] .

Tackling antibiotic resistance must become part of joint departmental strategies, the subject of research and concrete action to protect public health, human life and the environment. Effective and implemented regulations at global level on the use of antibiotics in the food sector are needed. The food sector cannot be resilient and sustainable if antibiotics are a key component.

[50] https://futurefood4climate.eu/biblioteka/biala-ksiega-fermy-przemyslowe/

[51] https://next.gazeta.pl/next/7,172392,30133911,naukowcy-zbadali-zanieczyszczenia-z-ferm-drobiu-leki-i-antybiotyki.html, https://naukawpolsce.pl/aktualnosci/news%2C98104%2Cnaukowcy-fermy-drobiu-emituja-do-srodowiska-zanieczyszczenia-w-postaci-lekow

Therefore, a resilient food system is a sector that supports and promotes plant-based, local, healthy food for people.

2.7 Fiscal policy

Fiscal policy, including government spending and taxation decisions, can significantly support the building of a resilient food system. In 2024, as a result of a change in the Polish government's decision on the level of value-added tax on staple foods, we asked policymakers to act on fiscal policy for a sustainable food system.

In the letter[52] to the ministries, we pointed out several elements and tools that should form the foundation for building fiscal policies for food security, i.e:

> *"VAT should, in addition to fulfilling a budgetary function, create space and facilitate access to healthy and sustainable food. Ending the periodic tax reduction for vegetables and fruits that have a positive impact on people's health and quality of life may reinforce the quality of food poverty of Poles. In a recent report by the Food Banks: Malnutrition and Hunger in Poland[53] indicates that seniors and senior citizens, children, people with disabilities and single parents, i.e. particularly vulnerable groups of people, are currently in the most difficult situation. Quoting from the report: "In the households of 53% of the people surveyed, there is not enough money to meet basic needs - also to buy food. More than 80% of them felt hunger at least once in the last year, which could not be satisfied for financial reasons. In 56% of homes, this situation occurs regularly. Six out of ten people have to borrow to buy food. More than two-thirds of those surveyed had to forgo grocery shopping to finance other expenses, such as paying for medicine or rent. Whole groups of products therefore disappear from the plates of poor households. In order*

[52] https://futurefood4climate.eu/wp-content/uploads/2024/04/Apel-organizacji-pozarzadowych-i-osob-eksperckich-ws.-podatku-VAT.pdf
[53] https://bankizywnosci.pl/niedozywienie-i-glod-w-polsce-raport/

to save on food, more than 60% of respondents give up fish, 53% give up meat and cold cuts, and almost 41% give up vegetables. Sugar and sweets are also disappearing from the shopping list, as well as drinks, including coffee and tea." [54]

The report also points to two sides of food poverty: qualitative and quantitative. As Dr. Marta Czapnik-Jurak notes, "*Paradoxically, the result of qualitative malnutrition is overweight and obesity. This includes children eating high-energy foods with low nutritional value, such as snacks and sweets*." [55]

The data on the health status of Poles is alarming: back in 1974, 25% of Poles suffered from obesity, while in 2016 it was 65%, and the forecast for 2025 speaks of 75% of people with this disease. The dynamics of the rise in obesity are enormous: every third child in Poland is overweight[56] .

The state should tackle quality food poverty also through fiscal policy and in line with the ambitions of the Farm to Fork strategy[57] :

"*Tax incentives should also drive the transition towards a sustainable food system and encourage consumers to choose a balanced and healthy diet. The Commission's proposal on value-added tax rates could allow Member States to apply rates in a more targeted way, for example to support organic fruit and vegetables. EU tax systems should also aim to ensure that the price of different foodstuffs reflects the*

[54] idem

[55] Dr Marta Czapnik-Jurak was a guest speaker at the 2nd Safe Food Forum, presenting the consequences of food poverty and unnoticed quality food poverty for groups at risk of poverty - link to meeting: https://www.facebook.com/greenrev.institute/videos/769432571896783/; link to presentation: https://www.facebook.com/greenrev.institute/videos/769432571896783/

[56] https://www.nik.gov.pl/aktualnosci/panel-ekspertow-zdrowe-odzywianie.html

[57] https://eur-lex.europa.eu/legal-content/PL/TXT/?uri=CELEX:52020DC0381

real costs associated with the use of scarce natural resources, pollution, greenhouse gas emissions and other environmental externalities."

Already in 2021. Green REV Institute and Action Democracy addressed the President of Poland Andrzej Duda on climate and environmentally just food pricing. As part of the Carbon Pricing Food campaign[58], the Green REV Institute, as a partner of the European True Animal Product Pricing Coalition (TAPP Coalition), together with 90 NGOs from around the world, called on the 50 member states (35 OECD countries and 15 other countries) involved in the UN Summit on Food Systems, the CBD Conference on Biodiversity and the 2021 Climate Change Conference (COP26) to:

1. public carbon pricing for meat and dairy
2. use of revenues from higher meat/milk price brackets (taxes) to compensate low-income social groups, e.g. by reducing taxes on low-carbon foods (vegetables, fruit, vegan meals)
3. compensation for farmers, i.e. subsidies for the reduction of greenhouse gas emissions and other emissions or animal agriculture.

A study by The Oeko-Institute *Reform on the VAT rates for animal and plant products*[59] (conducted using data from 5 EU Member States, including Poland) in 2022 shows that by increasing VAT rates on animal products, the greenhouse footprint of the human diet can be reduced, as consumption of animal products decreases. At the same time, this contributes to emission reductions in the agricultural sector, provided that the number of animal agriculture is reduced at the same time. Further emission reductions are possible if the freed up forage area is used for re-wetting organic soils or other more extensive farming methods. Increased VAT rates

[58] https://futurefoodprice.org/

[59] https://futurefood4climate.eu/wp-content/uploads/2022/06/Greenpeace_Analysis_of_VAT_rates_for_animal_and_plant_products.pdf

on food can be a first, but already well-established instrument for market control and thus an important starting point for the introduction of pricing instruments.

"*The following conclusions can be drawn* from the *assessment of individual Member States:*

- *The increase in VAT on animal products sends a clear price signal, to which male and female consumers respond with a change in demand.*
- *In the short term, the VAT increase may provide the first incentive to influence consumption.*
- *By extending the VAT increase to all animal products, a greater reduction in greenhouse gas emissions can be achieved than if the focus were solely on animal products. This is necessary in light of the 2050 targets.*
- *The potential to reduce greenhouse gas emissions will only be realised if reduced demand leads to a reduction in the production of animal products, rather than maintaining current production levels and increasing exports.*
- *Other instruments are needed to reduce supply-side animal agriculture.*
- ***The additional burden on individuals can be significantly reduced by lowering VAT on plant-based foods.***
- *An increase in VAT on animal products is one of the few measures that combine the steering effect of climate policy with additional revenue for the state. These could be redirected, for example, to the restructuring of animal agriculture farming in terms of animal welfare and climate protection.*
- *Adverse developments such as a further drop in producer prices, lower sales of higher-value products and the promotion of exports of animal products should be monitored and addressed.*
- *Changes in VAT rates would lead to a discussion in society and thus increase public awareness of the issue. Although this carries the risk of*

negative consumer attitudes, it also offers the opportunity to achieve additional effects by increasing knowledge and awareness[60] ".

VAT is a tool of the state that should be used not only to shape the state budget but, in particular, for policies to support and protect public health, address social exclusion and promote food solidarity and, in the context of the climate challenge, to meet the objectives of the Paris Agreement. The end of the period of VAT reduction on staple foods should not be done without an analysis of the opportunities and benefits of maintaining a zero VAT rate for vegetables, fruits, cereal products, foods that have a significant impact on people's health and quality of life. Food solidarity should be combined with climate solidarity and a deeper analysis of VAT as one of the instruments to achieve climate policy objectives. Undoubtedly, VAT cannot be the only element of transformation, but it cannot be left out of the plan to create a sustainable food system.

2.8 International agreements

International agreements play a key role in building the resilience of the food system by promoting cooperation, creating stable trade frameworks, supporting sustainable development and managing risks. Through international cooperation and the harmonisation of policies, countries can respond more effectively to global challenges of food security and adaptation to changing climatic conditions.

Sustainability and adaptation to climate change must be promoted by international agreements. The Paris Agreement commits countries to reduce greenhouse gas emissions, which has a direct impact on agriculture and food production. Sustainable agricultural practices are key to achieving climate goals. The United Nations Convention on Biological Diversity (CBD)

[60] https://futurefood4climate.eu/wp-content/uploads/2022/06/Greenpeace_Analysis_of_VAT_rates_for_animal_and_plant_products.pdf

promotes agricultural practices that conserve biodiversity, increasing the resilience of food systems to climate change and environmental threats.

The Green REV Institute has repeatedly undertaken advocacy work in the case of the EU-Mercosur agreement. The trade agreement between the European Union (EU) and the Mercosur countries (Argentina, Brazil, Paraguay and Uruguay) has faced many objections and controversies since its negotiation, which include:

- deforestation of the Amazon. One of the main objections is that the agreement could increase deforestation in the Amazon, especially in Brazil. Increased exports of agricultural products such as soya and beef could lead to further deforestation of the rainforest, which is crucial to the global climate balance.
- climate commitments. The agreement does not contain sufficient safeguards to ensure compliance with climate commitments under the Paris Agreement. These concerns are mainly related to the lack of environmental enforcement mechanisms.
- competition for local farmers. The deal could lead to the EU market being flooded with cheap agricultural products from Mercosur, which could negatively affect prices and the competitiveness of local producers. There are also concerns about food production standards. Agricultural products from Mercosur may not meet the same quality and safety standards as EU products.
- The rights of indigenous peoples. These values may be threatened by the expansion of agriculture and industry in areas traditionally inhabited by these communities.

The European Parliament in 2023 adopted Regulation 2023/1115 on the making available on the Union market and exports from the Union of certain goods and products related to deforestation

and forest degradation and repealing Regulation (EU) No 995/2010[61] . The Regulation indicates that:

> "The *climate crisis contributes to the global loss of biodiversity, which in turn exacerbates climate change - these are therefore inextricably linked phenomena, as recent studies have confirmed. Biodiversity and healthy ecosystems are essential for climate-resilient development. Insects, birds and mammals act as pollinators and seed dispersers and can directly or indirectly contribute to more efficient carbon storage. Forests also provide a constant replenishment of water resources and prevent droughts and their harmful effects on local communities, including indigenous peoples. Drastically reducing deforestation and forest degradation and systematically restoring forests and other ecosystems is the most important nature-based solution for mitigating climate change.*
>
> *Biodiversity is essential to the resilience of ecosystems and their services both locally and globally. More than half of the world's gross domestic product depends on nature and its services. Three key economic sectors - construction, agriculture and food and beverages - are highly dependent on nature. Biodiversity loss threatens sustainable hydrological cycles and food systems, putting food and nutrition security at risk. More than 75 percent of the world's food crop types depend on animal pollination. In addition, genetic diversity and ecosystem services are critical elements used by a number of industries in the production process, most notably medicines, including antimicrobials.*
>
> *Climate change, biodiversity loss and deforestation are issues of the utmost global importance that affect the survival of humanity and sustainable living conditions on Earth. The acceleration of climate change, biodiversity loss and environmental degradation, coupled with tangible examples of their devastating effects on nature, people's livelihoods and local economies, have led to the recognition of green*

[61] rozporzadzenie-2023-1115-w-sprawie-udostepniania-na-rynku-unijnym-i-wywozu-z-72173491

transition as a critical goal of our time and as an issue of gender equality and intergenerational equity.

Environmental human rights defenders who seek to protect and promote environmental human rights, including access to clean water, air and land, can often become targets of harassment and deadly attacks. These attacks disproportionately affect indigenous peoples. According to 2020 reports, more than two-thirds of the victims of these attacks were working to protect the world's forests from deforestation and industrial development.

Union consumption is a significant driver of deforestation and forest degradation globally. The impact assessment of this regulation estimates that without appropriate regulatory intervention, consumption and production in the Union of just six commodities (cattle, cocoa, coffee, oil palm, soybeans and timber) would increase to around 248 000 hectares of deforested area per year by 2030."

Countries and organisations must develop and effectively implement regulations in the area of trade agreements so that the goal is to build food and climate justice.

2.9 Large-scale farms

Factory farms have a significant negative impact on building the resilience of the food system. Farms release large amounts of pollutants into ground and surface water, emit significant amounts of greenhouse gases such as methane and carbon dioxide, and lead to soil degradation. These negative environmental impacts undermine natural life-support systems and reduce the long-term resilience of food systems.

Factory farms often specialise in the production of one type of animal or plant, which can lead to a lack of biodiversity. Monocultures are more vulnerable to hazards such as diseases or pests, leading to significant losses in food production and reducing the overall resilience of the food system. Intensive animal production on industrial farms leads to health problems in both animals and humans. The use of antibiotics in breeding to prevent disease or accelerate growth leads to

the development of antibiotic resistance, which poses a serious threat to public health. Factory farms negatively affect local farming communities by displacing smaller, local farms and leading to a concentration of land ownership. Such concentration reduces farm diversity, limits local agricultural knowledge and reduces local resilience to economic change. Industrial food production focuses on quantity rather than quality. As a result, products from industrial farms are expected to have lower nutritional value compared to those from more sustainable production systems. This affects the health of consumers and reduces overall population resilience to disease.

The Animal Agriculture Sector White Paper: Stench, Blood and Tears by Dr. Sylwia Spurek, is the only comprehensive study to date showing facts and commentary by expert persons on the impact of animal agriculture production on human health and life, among other things.

> "*Farms have a negative impact on human health - both globally and locally. People living near them are at risk of developing a variety of health problems, which can be attributed to the following effects of farms: elevated levels of PM2.5; the spread of zoonoses (through direct contact with infected animals or indirectly through the environment); the burden of diseases such as asthma, pneumonia, chronic obstructive pulmonary disease (COPD), antibiotic resistance (antibiotic-resistant and mulantibiotic-resistant bacterial strains and antibiotic resistance genes), and the psychosomatic and irritant effects of odours and noise. To this set of local problems must be added the risk, also relevant globally, of the emergence of further zoonoses caused by disease agents that are new or existing, which will develop additional characteristics after a change of host or area of distribution. Examples of such diseases are Q fever, which has appeared in the Netherlands in a human population living around a goat farm, and avian influenza, which experts believe will sooner or later trigger an epidemic of a scale that is difficult to predict. According to the One Health concept, promoted by, among others, the European Commission, human*

health is closely linked to animal health and the state of the environment. This approach aims to ensure the long-term sustainable use of the Earth's resources, the need to provide wholesome and healthy food for people and to protect the health and welfare of animals, especially so-called farmed animals. Its practical application implies the need to design and implement programmes, policies, legislation and research based on collaboration between many sectors to achieve better public health outcomes. The concept is implemented to varying degrees at local, national and global levels. It has been gaining popularity in recent years due to the increasing epidemic threat from diseases of animal origin."

In June 2022. Ministry of Health, in a letter[62] summarising the analyses carried out in Wielkopolska, indicated:

"*Animal animal agriculture is undoubtedly not without its health implications for both those working on industrial farms and those living in the vicinity. In addition to chemical and physical hazards, harmful factors of biological origin, which include micro- and macro-organisms (bacteria, viruses, actinomycetes, fungi) and the structures and substances they produce that have an adverse effect on humans and can cause ailments and diseases of, among other things, occupational origin, pose a threat. In a rural environment, the sources of harmful biological agents (SCBs) are: infected humans and animals, sewage, waste, animal and plant products, dust, human and animal excretions, clinical material, soil, water, aerosols. SCBs are most commonly transmitted by the air-droplet route, air-dust route, through the skin and mucous membranes, and by the bite of arthropods (ticks, fleas). Based on the type of effect on the human body, harmful biological agents can be divided into those that cause zoonoses (zoonotic diseases) or are characterised by allergenic and immunotoxic effects. One of the most serious risks for workers on industrial farms are bioaerosols, which may include particles whose source is mainly animal*

[62] https://futurefood4climate.eu/biblioteka/fermy-przemyslowe-vs-zdrowie-min-zdrowia/

agriculture (secretions, excretions, epidermal fragments, feathers, etc.). In Poland, there are no binding standards for permissible concentrations of bacteria, thermophilic actinomycetes, fungi and bacterial endotoxin in the air at given workplaces, while there are proposals of the Expert Group for Biological Agents for permissible concentrations of the above-mentioned agents in workplaces contaminated with organic dust. Difficulties with the introduction of legally binding standards are due, among other things, to the limitations of scientific research on bioaerosols on animal agriculture farms. Private entrepreneurs are reluctant to agree to air sampling for fear that such activities may have a stressful effect on the animals."

The Green REV Institute is working for a moratorium on large-scale farms and the introduction of legislation that will restrict and end the operation of large-scale farms.

2.10 Education

Education plays a key role in building resilience in the food system, influencing different groups in society, including farmers, consumers, policy makers and local communities. Through education, awareness, skills and adaptive capacity of these groups can be increased, leading to a more sustainable and resilient food system. The Green REV Institute made recommendations to the Ministry of Education[63] as part of the new core curriculum health education. The main conclusions are:

"*Health education is key to improving quality of life, supporting and promoting informed food choices, and education for a sustainable food system. It is an essential investment in future generations, the health system and informed consumers. In the long term, health education will contribute to the reduction of health care costs and*

[63] https://futurefood4climate.eu/wp-content/uploads/2024/05/Rekomendacje-edukacja-zdrowotna.docx-2-1.pdf

make chronic disease prevention more effective. It also improves the quality of life of the public and the quality and implementation of climate policies.
Educational institutions should undertake wide-ranging educational activities focused on the impact of food on the quality of life of children and adults in Poland, but also on the condition of the climate and biodiversity. Schools should work effectively on developing healthy eating habits from the earliest years of education. This is an investment in the future that will contribute to a more informed society. It is undoubtedly necessary to introduce health education in combination with systemic changes in the functioning of establishments."

An education system is a support system for understanding the role, importance of diet, food, agriculture on our health, food security, local communities, animals and the environment. Education needs to include all groups that influence consumer awareness and behaviour such as doctors, nutritionists, teachers, local governments, policy makers, local leaders, farmers.

3. Farmers and plant food producers

Farmers and food producers are stakeholders who must be included in the transformation needed to build food system resilience.

In the European Parliament resolution of 19 October 2023.[64] "European Protein Strategy" pointed out that a value chain approach should be adopted that contributes to the added value of proteins from sustainable production, especially plant proteins, as the production of local products with high added value strengthens the value chain and encourages investment by farmers and women farmers. Protein crop production in the European Union has grown and developed over the last 10 years, but still does not meet the needs of the animal agriculture sector.

[64] https://www.europarl.europa.eu/doceo/document/TA-9-2023-0375_PL.html

This is due to the development and growth of animal agriculture production and reinforces the EU's dependence on protein crop imports from third countries. Diversifying proteins and strengthening the role of plant proteins for humans will allow the EU to strengthen its autonomy and the food sovereignty of Member States while moving towards plant-based diets that are healthier for people, the planet and animals.

It is climate change that is making agriculture a victim of the climate crisis and significantly bearing the costs of not transforming the food system. The European Green Deal, the Farm to Fork strategy and the Common Agricultural Policy reforms were designed as first actions for building resilience and adaptation of agriculture in the context of climate catastrophe. While the food system is currently the main source of environmental degradation and biodiversity loss, it is also one of the sectors most affected by degradation. The conversion of natural ecosystems into cropland and pasture, together with the consequences of agricultural pollution, seriously threatens the vital ecosystem services that underpin agriculture itself. A complete transition is needed, involving changes in production, landscape management and the entire food system. This is because all activities related to the food system, from agriculture to processing, logistics and retailing to consumption, affect planetary boundaries and thus offer many opportunities for mitigation (Campbell , 2017; Clark , 2020).

As the authors and authors of the report Options for the Paris - Compliant animal agriculture Sector[65] (Harvard 2024) point out:

> "*All aspects of society need to be radically transformed to fit into the global temperature limits set by the Paris Agreement. Most policy action has focused on the energy transition, however, a transition in the food system is also needed - particularly for carbon-intensive agricultural products from animal agriculture production. For the first time, we identified a potential Paris Agreement-compliant emissions trajectory for the animal agriculture sector by obtaining responses from*

[65] https://futurefood4climate.eu/wp-content/uploads/2024/03/Paris-compliant-animal agriculture-report.pdf

more than 200 climate scientists and sustainable food/agriculture experts from 48 countries. More than 90% of those participating in the survey focused mainly (51%) or partly (40%) on their research on the causes, impacts or mitigation of climate change, and most had 11 or more years of experience in their field. The majority of experts (92%) agree that reducing emissions from the animal agriculture sector is important to limit temperatures to a maximum of 2°C above pre-industrial levels, and that emissions from the animal agriculture sector should be reduced as much as possible to reduce the risk of exceeding temperatures by 1.5°C (87%) or 2°C (85%). The largest number of experts agree that emissions from the animal agriculture sector must peak before 2025 in developed (35%) and middle-income countries (30%), and globally (28%). The largest number of experts agree that emissions from animal agriculture production must peak after 2030 in low-income countries (30%). In addition, 78% of respondents believe that it is important that absolute animal agriculture numbers also peak globally by 2025."

The United Nations Environment Programme (UNEP) What's cooking report (2023)[66] indicates that:

"*Globally,* ***food systems are responsible for about 30 percent of current anthropogenic greenhouse gas emissions that cause climate change. Animal products - including emissions from animal agriculture, feed crops, land-use change and energy-intensive global supply chains - account for almost 60 percent of food-related emissions, bringing the total to between 14.5 and 20 percent of global emissions.*** *The impacts of increasing demand for animal products (ASF) occur in the context of unsustainable farming methods and over-consumption, particularly in middle- and high-income countries. Overall, production and consumption contribute significantly to climate change, air and water pollution, biodiversity loss and land degradation. Although animal products are an important*

[66] https://futurefood4climate.eu/wp-content/uploads/2023/12/whats_cooking_frontiers.pdf

source of nutrition, high consumption of red meat and processed meat is associated with an increased risk of non-communicable diseases. The production of animal products is also linked to public health risks, such as animal-borne diseases and antibiotic resistance, and animal welfare concerns. Novel plant-based meat, cell-cultured meat and fermented products show the potential to reduce environmental impacts compared to many conventional animal products. They also hold the promise of reducing the risk of animal-borne diseases and antibiotic resistance, and can significantly reduce animal welfare concerns associated with conventional animal agriculture. Policymakers and politicians can also help by taking steps to protect food security, jobs, livelihoods, social and gender equality and culture. Governments have numerous policy options to explore and support the potential of alternatives, including support for (open access) research and commercialisation and equitable transition policies.

Supported by appropriate legislation and management instruments, animal product alternatives can play an important role in transforming food systems to be more sustainable, healthier and less harmful to animals."

Food security as well as food safety today depends on the openness and preparedness of Member States and EU authorities to move towards sustainable systems and a consistent shift away from animal agriculture production, which, on the one hand, makes the EU independent from the supply of plant protein for animal agriculture, on the other hand, builds local food systems based on plant protein for humans, strengthens public health and reduces the risks of antibiotic resistance, diet-related diseases and builds a food system that is able to limit damage to the climate, environment and biodiversity.

The transition will not take place without supporting the transition of farms to plant-based systems for people and supporting plant-based food producers. We note with concern the lack of support and constraints on the development of the plant-based sector in Europe - from the lack

of financial support under the Common Agricultural Policy, to the censorship of the naming of meat and dairy alternatives. In 2020. The European Parliament tried to push through the so-called Amendments 165 and 171, which would have banned the use of terms such as 'in style', 'alternative', 'substitute', 'flavour' by vegan products along with the names of dairy products, as well as banning terms such as 'buttery' or 'creamy'. It would be impossible to advertise such products in similar packaging associated with traditional dairy (e.g. in a carton). Fortunately, in the course of the legislative work, it was shown that this wording of the legislation contradicts EU objectives, such as the *Farm to Fork* strategy, *the European Green Deal* and the principle of proportionality. The current wording proposed by the Polish government, but also by other EU governments, for the naming of plant-based substitutes hits local producers. The French Conseil d'Etat has asked the European Court of Justice (CJEU) to clarify whether the government's decree banning the use of the term 'meat-like' for plant-based products is compatible with EU law. The decree was originally published in 2022, with the intention of banning the use of terms such as

'steak' and 'sausage' in relation to plant-based foods. France was the first EU country to attempt such a ban, supported by the national meat industry and the agricultural lobby.

2021. The Green REV Institute, together with Dr. Sylwia Spurek presented a package of legal solutions, the so-called 'five for the plant based industry':

1. ban on advertising meat, milk, eggs;
2. the abolition of funds for the promotion of these products;
3. setting up a fund to promote veganism;
4. from kindergarten onwards, classes on 'climate and animal rights';
5. 0% VAT on meat, milk, egg substitutes.

The introduction of the Five in individual countries would have a positive impact on building resilience in the food system and supporting a just transition.

4 Summary

Food and nutrition security represents one of the most significant challenges to the resilience of the food system *per se*. Difficulties in the aforementioned area, compounded by inefficient and inequitable management, include antibiotic resistance, declining biodiversity, or civilisational and diet-related diseases.

Building a resilient food system and guaranteeing the right to healthy, local food requires a transition to fully plant-based food systems. A plant-based food system transition is not only necessary but also required for the well-being of people, animals and the planet. As such, it

requires a comprehensive approach that involves various aspects of policy, education, regulation and social and economic support.

As a green think tank and climate watchdog working for food system transition, the Green REV Institute has consistently pointed out that the food system needs complex, comprehensive systemic and institutional action.

Creating a sustainable and resilient food system implies, at the same time, the need to address and implement actions within several specific areas of key importance.

Firstly, the need to educate the public at grassroots level, on the one hand, and to guarantee a wholesome and sustainable collective food system, on the other, must be strongly emphasised. The lack of access to vegan and sustainable diets in educational establishments is a serious challenge in the context of pupils' rights, action for a sustainable food system, climate, human and animal rights.

It is these motives and ambitions that were behind the 'Plant Based School' programme developed by the Green REV Institute, Parents for the Climate, the Rocket Oncology Foundation, the Ecological Thinking Club and the Polish Council of NGOs. The regulation of mass catering is important because of the health of the people who benefit from it, their rights and also because

mass catering builds demand for food. Education should focus on raising awareness about a healthy diet, sustainable agriculture and the benefits of consuming locally produced food.

Moreover, transition at every level of production, distribution and consumption is required to create food resilience.

Consequently, the development of worldwide, restrictive regulations for global retail chains should also be considered urgent and indispensable.

From this perspective, green public procurement as a process in which public bodies aim to procure goods, services and works with a lower environmental impact throughout the product life cycle, compared to products with the same functions that would normally be procured, is also crucial. Green public procurement can, in other words, stimulate demand for sustainable agricultural products, thereby supporting local and regional producers and reducing pressure on natural resources.

These issues are closely linked to consumer rights, including in particular the right to health and safety, which are currently being violated on many levels. Consumer knowledge and awareness of the origin of food, how it is produced and its impact on the environment are key to making informed purchasing decisions.

Building resilience in the food system is also critically influenced by fiscal policy and financial support systems for agriculture, which in their current form negatively affect food security and climate change adaptation.

The Green REV Institute consequently advocates the need for a profound reform of the Common Agricultural Policy operating at European level, which in its current form supports animal production and the industrial animal animal agriculture sector at the expense of supporting plant

crops for humans. At the same time, in addition to the reform of the CAP, it is necessary to review all financial measures: national, promotion funds, European Programmes such as Horizon 2020, Life +, EU Structural Funds, Cohesion Fund, which in their current form reinforce the climate crisis and environmental disaster.

With this in mind, we point out that an essential step in creating a sustainable and resilient food system is the transition to a plant-based food system. The transition to a plant-based diet is necessary not only for health reasons, but also for environmental reasons. A plant-based diet reduces greenhouse gas emissions, reduces water consumption and reduces deforestation associated with animal agriculture feed production. Switching to a plant-based diet also helps to improve public health by reducing the risk of diet-related diseases such as obesity, type 2 diabetes, and heart disease.

The transition to a plant-based food system is thus crucial to protecting the health of people, animals and our planet. Building a resilient food system requires coordinated initiatives at many levels - from policy and regulation to education to changes in consumption and production practices. However, the time for taking and effectively, realistically implementing these actions is now.

About the Green REV Institute

The Green REV Institute is a green think tank, a climate watchdog working for food system transition that connects the dots on the map of human rights, animal rights and climate. Founded in 2014, it engages activist individuals in systemic change and builds collaborations and partnerships for food system transition.

Green REV Institute is a member organisation of 50by40, Eurogroup for Animals, European Vegetarian Union, Aquatic Animal Alliance, TAPP Coalition, PlantEurope network, OFOP, Let

them Live, one of 10 NGOs in the EU Platform on Animal Welfare, supports the Plant Based Treaty.

It initiated and is the operator of the first advocacy coalition for food system repair in Poland Future Food 4 Climate, organiser of the international event European Vegan Summit, producer of the reportages Vegan Warsaw and Vegan Businesses Talks. In 2023, Green REV Institute produced a third documentary entitled "Dining on Despair", which premiered in February 2024. Green REV Institute involves young people in food system repair activities, educates and mobilises within the Green Advocacy Academy. Green REV Institute is the operator of the Plant Based School Programme.