WHITE PAPER
SOWING THE SEEDS OF CHANGE
TOWARDS A MORE JUST AND INCLUSIVE FOOD SYSTEM IN SOUTH AFRICA

WORLD FOOD DAY 2022
LEAVE NO ONE BEHIND
16 OCTOBER 2022

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Project: Barriers to the transformation of South Africa’s food system – Can the Law be a Lever for Change?

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PROJECT DONOR
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ANIMAL LAW REFORM SOUTH AFRICA
Animal Law Reform South Africa (“ALRSA”) is South Africa’s first and only dedicated animal law non-profit organisation. ALRSA’s vision is a society whose laws and policies recognise and protect the interests of humans, nonhuman animals and the environment.

ALRSA operates through three key Pillars being: Animal Wellbeing; Social Justice; the Law.

ALRSA undertakes its work through three main Mechanisms, namely:

- Education & Research
- Legislative & Policy Reform
- Litigation & Legal services

Through these Mechanisms, ALRSA aims to contribute to the development of a robust animal law ecosystem in South Africa which recognises the intrinsic worth of non-human animals as sentient beings. Our work is grounded in our understanding that it is critical for a context-sensitive approach to be taken to the furtherance of animal protection in South Africa, and that the impact of our work is enhanced through an intersectional approach to animal wellbeing, social justice and environmental protection.

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Available at: https://www.animallawreform.org/wp-content/uploads/2022/10/White-Paper-Food-Systems.pdf *All co-authors contributed to specific portions of this White Paper.

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The theme for this year is “Leave no one behind” with a recognition that the day comes at a time when the world is facing numerous and unprecedented crises such as “an ongoing pandemic, conflict, a climate that won’t stop warming, rising prices and international tensions” with serious implications on food security. Resultantly, 3.1 billion people, who constitute almost 40% of the world’s population cannot afford a nutritious meal. The consequences are direr for the vulnerable and marginalised members of society. Women are 15% more likely than men to be moderately or severely more food insecure, children are forced into child labour, countries that were already food insecure are pushed further into crisis, climate change affects the rural poor more as their yields are severely reduced whilst indigenous peoples experience higher rates of poverty, malnutrition and internal displacement compared to non-indigenous people.

However, it is not only human animals that are impacted by current food systems. Trillions of nonhuman animals are implicated in the production of food. Animals suffer greatly and are ultimately killed: either in the process of feeding humans directly, or indirectly in the production of feed for other animals who are ultimately also fed to humans. Therefore, if we are to truly embrace the notion of “leaving no one behind”, we must recognise and explore all of the victims in our pursuit of food. Similarly, in our pursuit of more just and sustainable food systems, our impacts of utilising animals as food must be interrogated and understood. While the production of any food causes harm, it is evident that some foods are much more harmful than others. Similarly, not all are equally affected by our food systems.

The Constitution of the Republic of South Africa recognises and protects the Right to Food. The country also has a National Food and Nutrition Security Policy whose strategic goal is “to ensure the availability, accessibility and affordability of safe and nutritious food at national and household levels.” As at June 2022, the population of South Africa was estimated at 60.6 million. In our own country, many are being left behind in terms of food security, in particular children, women, workers, the previously disadvantaged and other vulnerable groups.

Food security occurs when all “people have access to sufficient, safe, nutritious food to meet their dietary needs for an active and healthy lifestyle at all times.” However, in South Africa, between 2019 and 2021 4.1 million people were reported undernourished and 4.7 million severely food insecure. In addition, 0.2 million children under 5 years were affected by wasting, 1.3 million of children below 5 years stunted, 0.7 million

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1 https://www.fao.org/world-food-day/en
2 Ibid
3 Ibid
4 Section 27 (1) (b)
6 Statistics South Africa, ‘60.6 million people in South Africa’ available at: https://www.statssa.gov.za/?p=15601 (last accessed 8 October 2022)
7 Definition by the World Food Summit, 1996
children below 5 years overweight. 10.4 million adults were obese, 4.8 million women affected by anaemia while 2.1 million children were born with low birthweights.8

StatsSA reports that “the female population was more likely to be affected by both moderate to severe food insecurity and severe food insecurity compared to their male counterparts” and that “people residing in rural areas were the worst affected by the prevalence of moderate to severe and severe food insecurity”9 thereby bringing to the fore the aspect of vulnerability and marginalisation. The fact that over 80% of South African household are not involved in agricultural activities or food production10 compounds the challenge, given the high unemployment rate of over 33% in the country and therefore a corresponding inability to buy food. Compared to this, in South Africa, approximately 10 million tonnes of food that accounts for a third of the 31 million tonnes that are produced in the country annually goes to waste every year.11

South Africa raises and kills over 1 billion sentient land animals alone for food every year.12 This has negative implications for animals and their interest from direct cruelty to their positive welfare. It is not only farmed animals who are impacted with wild animals and biodiversity suffering by virtue of the country’s food production and consumption choices. In aquatic environments, animals are farmed through aquaculture, or caught directly from the wild for food for humans. Animals are also caught from aquatic environments to be ground up into fishmeal and fed to farmed and other animals and other aquatic animals are implicated in the fishing industry through issues such as bycatch, ghost nets, and other killing.

Further to the direct impacts on humans, current methods of production of food harm the environment, public health, human rights and social justice. This is exacerbated by lack of proper regulation of animal production for food and the enforcement of existing regulations where they do exist.

This clearly presents an unsustainable, unethical and dangerous model, which cannot be supported.

The negative impacts are being seen at a time when South Africa is aiming to increase animal production for food through specific and targeted government policy and legislation. Simultaneously, government is restricting industries13 aimed at providing alternative options to animal production and sourced foods which are largely considered much less harmful.

South Africa is a Constitutional Democracy with a supreme Constitution which provides for a plethora of guaranteed human rights. The Bill of Rights applies to all law, and binds the legislature, the executive, the judiciary and all organs of state. Furthermore, the Constitution places specific obligations on the State, some rights calling for more particular action. The South African Government has an obligation to properly regulate and enforce the animal agricultural industry and its far-reaching harms, as well as explore and regulate

10 Ibid
12 University of Cape Town, ‘Putting our principles where our mouth is’ available at: https://www.news.uct.ac.za/article/-2014-01-10-putting-our-principles-where-our-mouth-
is#:~:text=Every%20year%20in%20South%20Africa,2.7%20million%20chickens%20per%20day%20(last%20accessed%208%20October%202022)
13 For example, the Executive Officer of Agricultural Product Standards issued a communique dated 22 June 2022 addressed to all processors, importers and retailers of meat analogues advising them not to use legislated processed meat labels to mark or label analogue meat, with threats of seizure of any such labelled analogues.
Alternatives to animal products and protein as food. Government has failed to do both, which has led to legal loopholes and dire implications for animals, people and the planet.

This White Paper calls on the South African Government to make such a change. It requests the development of a robust regulatory ecosystem which moves away from intensive and industrial animal agriculture and production towards Alternatives. It does this to ensure that guaranteed rights in the Constitution are met and that industries and Government are held accountable.

Specifically, it calls on Government to recognise the various opportunities in Alternatives and initiate laws and policies which allow the country to “leapfrog” over harmful animal agricultural techniques and practices, towards a more just and inclusive food system.
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This White Paper was developed based on a Working Paper informed by research on South Africa’s food system. The Working Paper identified various challenges prevailing in South Africa’s food system requiring holistic interventions to address. The particular challenges identified and elaborated on in this White Paper relate to the country’s overreliance on animal-based protein and products (referred to as animal sourced foods or ASFs) and the barriers in advocating for a shift towards alternatives to animal proteins and products (referred to as Alternatives). Potential solutions as to how the law can be used as a lever to transition the country towards alternative products and systems are proffered. Consumption of ASFs is linked to a number of key issues of concern including animal welfare and wellbeing, human health, and social justice considerations as well as environmental and climate change concerns, among others.

Intensive animal agriculture has major impacts on the environment as it contributes significantly to global warming through emissions of greenhouse gases of methane and nitrous oxide, and displacement of biomass carbon on the land used to support livestock. Overall, South Africa’s emission factors are higher than values from other African countries. It is imperative to cut on intensive animal agriculture in order to reduce the country’s carbon footprint and the attendant climate change implications. Intensive animal farming is also identified as a major cause of land, air and water pollution with devastating consequences for these environmental elements, biological diversity, human health and social justice issues. There are human rights implications for workers who may experience negative psychological impacts from witnessing violence against animals in intensive animal farming systems. Furthermore, workers’ rights to health may be violated as a result of their interactions with animals (zoonotic diseases). In many instances, polluted water and destruction of fertile soil is also a women’s rights concern as women are often in charge of smaller subsistence farming supporting household consumption, and this directly impacts their livelihoods. Where water systems have become polluted due to intensive animal agriculture, this can extend to the reproductive rights of women and girl children.

Animals are also subjected to different kinds of abuse and mutilations as part of the intensive animal production system, thereby violating animal welfare and wellbeing. Direct and indirect support from the government allows intensive animal production facilities to systematically under cost and otherwise misprice meat and dairy products, which offers short term benefit to consumers but continues to impact negatively on the broader public interest. The status quo is reinforced by industry and government messaging asserting that food security is only possible in South Africa by expanding intensive animal production. This assertion ignores the uncosted negative externalities and is thus flawed. It is therefore recommended that the Government should not push the intensive animal farming agenda without putting in place legislative measures to regulate how this should be done. Putting adequate regulatory measures in place first, will help the government in understanding the impact of intensive agriculture on animal wellbeing and welfare, the environment and human health and rights, leading to different policy and legislative approaches on the matter.

There are numerous existing laws governing animal wellbeing and welfare and the interactions between animal production, the environment and human health and rights. However, the laws are scattered across different disciplines and mandate areas for government departments. As a result, implementation is lacking, or ineffective whilst public and stakeholder knowledge of the legal framework is lacking. This also leads to a lack of coordination amongst different government departments at national, provincial and local levels. A standalone law addressing the country’s food system in relation to animal production would help in addressing some of these challenges.

Promoting research into Alternatives is an important way of creating understanding around them and developing acceptance by consumers, the food industry and the government. The results on the consumer understanding and perception of both the animal welfare issues and animal farming practices in the survey undertaken as part of the development of the Working Paper preceding this White Paper demonstrate that there is no clear consensus and understanding of the animal farming practices and animal welfare issues in South Africa. This calls for public education
and capacitation to facilitate informed decisions on South Africans’ eating habits. Misleading messaging by the animal production and processing industry through deceptive advertising and labelling should be addressed. There should be education in schools on the impacts of climate change from industrialised farming systems and education on the benefits of a primarily Plant-based diet for personal and planetary health. University level programmes must also be developed, particularly for research purposes focusing on the negative effects of animal sourced foods, positive effects of plant-based foods and the science and technology that is required to produce Alternatives.

The South African legal framework must be analysed and at a minimum, be reformed in line with international standards such as the World Organisation for Animal Health (OIE) Standards whose aim is “to improve the health and welfare of animals throughout the world, regardless of socio-economic, religious or cultural context.”14 The Standards are informed by the most recent scientific knowledge and technical knowledge and seek to improve the prevention and control of animal diseases including zoonoses, as well as improve animal welfare throughout the world. However, such standards are not robust enough.

Much research is needed across the spectrum. For example, research is also needed to contextualise the extent of externalised costs within in the South African agricultural and food system; and consider alternative models of food production that recognise South Africa’s specific context of climate, soil suitability, population, politics and social environment. This should be supported by research into the impact of intensive animal farming on animal wellbeing and welfare, human health, social justice, the environment and climate change in order to inform law and policy reform. The health benefits and appropriate production methods of Alternatives are also important research areas to help in creating acceptance and ensuring that the same problems that are currently associated with intensive animal farming are not transplanted into the Alternatives industry and food sources production sector.

This White Paper identifies a number of barriers to the adoption of alternative sources of protein in South Africa. Some of these barriers include cost, accessibility, perception, awareness/knowledge, cultural considerations and efforts of the meat/animal farming industry lobby to dissuade government and consumers from adopting Alternatives. Government’s tax and incentive regime is a crucial aspect in lowering the cost of Alternatives to ensure affordability and increasing the cost of meat and other animal-based protein to reduce demand, given the general availability but small space allocation of Alternatives in South Africa’s retail sector. Large corporations should increase the number and amount of Plant-based Alternatives (e.g. supermarkets, fast food outlets, restaurants) and this should be promoted by the Government. Alternatives should be made available in low-income and rural areas, and closer to where people live.

There is currently significant stigma attached to Alternatives (given their association with veganism), leading to the view that they are expensive and specifically in the context of South Africa that they are for white people. Cultural, religious and traditional considerations also impact transformation from ASFs to Alternatives specifically Plant-based Alternatives. This is a huge concern from a human health perspective given the World Health Organisation reports on the carcinogenic probability of red and processed meat and the fact that there are other communicable and non-communicable diseases that are associated with the consumption of animal-based protein.

As part of the transformation process, the government and its departments and institutions need to rise to the challenge of properly and fairly regulating animal sourced foods (ASFs) and Alternatives in line with their respective mandates, giving consideration to their interconnected nature, and furthermore to properly monitor and enforce compliance to such regulation. The private sector must be held accountable to such regulation with adequate monitoring and there needs to be greater transparency. The public and consumers need to be provided with the relevant information and be better educated about their food in order to be empowered and to make informed decisions.

Dedicated research is needed in order to improve on production, supply, accessibility and acceptability of Alternatives in South Africa and beyond. Alternatives need to rise beyond being a niche commodity to being broadly accessible to

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the general public and this requires research to ensure efficient and large scale and cheap production and distribution of Alternatives as well as research on consumers and the general public to inform strategies to make the Alternatives more acceptable.

Currently South Africa experiences the deliberate unwillingness by the Government and other funding institutions to support the introduction of Alternatives towards transition of the local food system. Investments in local capacity to produce and distribute, and funding to promote uptake of Alternatives is key to the transition of SA food system. In other countries, this investment has been in the form of government levies to production, marketing and distribution. In 2021, a record $5billion was invested into alternative proteins by governments and private companies, however mostly from the USA, Europe, UK and partly Asia.\(^\text{15}\) The Government of South Africa and private industry both have the potential capacity to invest in Alternatives as they have done in animal agriculture, including intensive animal agriculture.

Other systemic issues need to be dealt with relating to the economy, society and social justice which should also inform law and policy. There is a need for better enforcement of existing laws, as well as the creation of new laws which should be passed or incorporated into the existing regime. Litigation may also be brought before courts by different interest groups for the judiciary to decide on pertinent issues, interpret the law and develop the country’s jurisprudence on the country’s food system in a way that progresses past current interpretations.

Given the inevitable growth of Alternatives, South Africa has an opportunity to be a leader in the area and gain a competitive advantage. There are various opportunities which, if properly capitalised on, can help assist the country and the African continent more broadly.

Before industrialised animal agriculture becomes too entrenched in the country, South Africa may learn from other jurisdictions and leapfrog over especially harmful means of producing food.

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<th>RECOMMENDED INTERVENTION 1: REGULATORY MORATORIUM</th>
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| A. Moratorium on any further and Withdrawal of existing draft Policies and Legislation which Explicitly Promote the Expansion of Animal Agriculture and Intensification of Animal Farming.  
B. Moratorium on Licensing of New and Expanded Facilities in Terms of Relevant Laws | A. Fund Research: Public and Government Funding  
B. Fund Research: University and Academic Institution Funding (Public and/or Private)  
C. Establish a Dedicated Government Fund for Alternatives |

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| A. Develop Single Overarching Food Framework Policy and Legislation  
B. Establishment of Intergovernmental Body Relating to Food Systems – Co-Operative Governance and Agreements  
A. Mandate: Attend to Problematic Mandates and Conflicts of Interest  
B. Develop Dedicated Governmental Body  
C. Initiate External Stakeholder Discussions | A. Explore and Initiate Finance, Subsidies and Economic Incentives or Alternatives  
B. Incentivise producers, suppliers and stakeholders for good animal welfare, environmental and other relevant practices  
C. Investigation and Analysis of Existing Subsidies and Payments to Animal Agricultural Industry  
D. Empower Farmers: New Farmers and Existing Farmers through Exploring and Funding Transitional Programs |

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<th>RECOMMENDED INTERVENTION 10: GOVERNMENT POLICIES, PROCUREMENT AND PROGRAMS</th>
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| A. Develop a Strategy and Vision for Alternatives (including protein and other products)  
B. Specific Regulation for each of Plant-based and Cellular-based Alternatives, with scope for other Alternatives in future | A. Government Procurement  
B. Government Policies  
C. Government Programs |

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B. Specific Welfare Standards for Animals in Agriculture  
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B. Database: Auditing, Publication of Non-Compliance and Violations |

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<th>RECOMMENDED INTERVENTION 5: ALIGNMENT OF SCIENCE AND RESEARCH WITH EXISTING POLICIES AND REGULATION</th>
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| A. Ensuring Research, Data and Information relating to Realities and Harms of Animal Production as well as Incorporating Alternatives into Environmental Law and Policy  
B. Ensuring Research, Data and Information relating to Realities and Harms of Animal Production as well as Incorporating Alternatives into Agricultural Law and Policy  
C. Ensuring Research, Data and Information relating to Realities and Harms of Animal Production as well as Incorporating Alternatives into Human Health Standards and Regulation Ensuring Research, Data and Information relating to Realities and Harms of Animal Production as well as Incorporating Alternatives into Constitutional and Social Law and Policy | A. Penalise products from intensive systems of production |

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<th>RECOMMENDED INTERVENTION 6: RESEARCH</th>
<th>RECOMMENDED INTERVENTION 13: LABELING, MARKETING AND ADVERTISING</th>
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| A. Initiate Programs at Universities and Academic Institutions including Youth Empowerment and Development relating to Alternatives  
B. Develop robust and comprehensive list of missing information in South African Context and Develop a Research Roadmap and Agenda | B. Labeling Requirements: Animal welfare and wellbeing standards and regulation  
C. Labeling Requirements: Climate and Health as Examples: Animal welfare and wellbeing standards and regulation  
D. Restrictions on Labeling, Marketing and Advertising |

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| A. Develop skills and knowledge relating to Alternatives | A. Review and Update Nutritional Guidelines / Food Pyramids  
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D. Product Placement / Promotion  
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B. Animal Initiatives  
C. Nature Initiatives | |
## INTRODUCTORY MATTERS

### 1. LIST OF WIDELY UTILISED ABBREVIATIONS AND TERMS

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<tr>
<td>ALRSA</td>
<td>Animal Law Reform South Africa</td>
</tr>
<tr>
<td>Alternatives</td>
<td>Plant-based Alternatives and/or Cellular-based Alternatives as appropriate and as the context may apply</td>
</tr>
<tr>
<td>ASFs</td>
<td>Animal Sourced Foods</td>
</tr>
<tr>
<td>CAFOs</td>
<td>Concentrated Animal Feeding Operations (also called Intensive Animal Farming Systems)</td>
</tr>
<tr>
<td>Cellular-based Alternatives / Cell-based Alternatives</td>
<td>According to FAO cellular based alternatives are derived from culturing cells isolated from animals and processing them to produce food products that are comparable to the corresponding animal versions. For purposes of this White Paper the focus is largely on cell-based alternatives to meats</td>
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<tr>
<td>DALRRD</td>
<td>Department of Agriculture Land Reform and Rural Development</td>
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<tr>
<td>DFFE</td>
<td>Department of Forestry, Fisheries and Environment (South Africa) – previously the Department of Environmental Affairs (DEA)</td>
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<tr>
<td>DoH</td>
<td>Department of Health (South Africa)</td>
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<tr>
<td>DOJCS</td>
<td>Department of Justice and Correctional Services</td>
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<tr>
<td>DTIC</td>
<td>Department of Trade, Industry, and Competition (South Africa)</td>
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<td>GFI</td>
<td>Good Food Institute</td>
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<td>EU</td>
<td>European Union</td>
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<tr>
<td>KIIIs</td>
<td>Key Informant Interviews conducted as part of and included in the Working Paper</td>
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<tr>
<td>NSPCA</td>
<td>National Council of Societies for the Prevention of Cruelty to Animals</td>
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<tr>
<td>Plant-based Alternatives</td>
<td>Plant based alternatives are derived from processing plants and plant products to create colours, flavours and textures that resemble those of ASFs. For purposes of this White Paper the focus is largely on cell-based alternatives to meats, often referred to as ‘meat analogues’.</td>
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<tr>
<td>Project</td>
<td>ALRSA’s project entitled “Barriers to the Transformation of the South African Food System – Can the Law be a Lever for Change”</td>
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<tr>
<td>UNSDG</td>
<td>United Nations Sustainable Development Goals</td>
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<td>WHO</td>
<td>World Health Organisation</td>
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<tr>
<td>WOAH or OIE</td>
<td>World Organisation for Animal Health</td>
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<td>Working Paper Survey</td>
<td>The public survey conducted in terms of this Project and referenced in the Working Paper.</td>
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2. PURPOSE AND AVENUES

This White Paper is part of a project entitled: “Barriers to the Transformation of the South African Food System – Can the Law be a Lever for Change” (the “Project”) which commenced in March 2022.

The purpose of this Project and its various components is to conduct a diagnostic analysis of barriers to the transformation of South Africa’s food system to inform advocacy for the reform of the regulatory regime to promote farmed animal protection, human rights, health, and environmental protection and to provide for a phased shift away from dependence on intensive animal agriculture and animal-based protein and move towards Alternatives including those which are Plant-based and Cellular-based.

More specifically, this Project intends to draw attention to the regulatory gaps that exist in these areas and identify opportunities to grant greater protection to animals, humans, and the planet.

The purpose of this White Paper is to provide guidance and recommendations in relation to animal-sourced foods (ASFs) and their impact on people, animals and the environment and chart a way forward with regards to Alternatives and transforming the food system in South Africa. The focus is largely on the regulatory regime with a primary emphasis on nonhuman animals within these systems and a secondary emphasis on critical related areas which impact on humans and nature including environmental, health and food safety, consumer protection and others.

There is a vast gap in knowledge, information, research, and transparency around animal production for food in South Africa. This transcends many issues including the numbers of animals implicated; methods of production; animal welfare and treatment; environmental practices; use of antibiotics; diseases; food safety; human health; social justice; worker safety and wellbeing; economic impacts and the true cost of such products; among many others. Accordingly, this White Paper hopes to go some way towards bringing to the surface information and potential proposals which can be used by those working in these sectors to advocate for better regulation and practices that are more ethical, sustainable and in pursuit of social and inclusive justice.

It aims to highlight gaps, potential items for further research, debate and discussion and identify matters to be explored and researched further in pursuit of a just food system. It is not intended to serve as a full analysis of all relevant issues and recognises there are many complexities and important realities and issues which are not included or highlighted.

The objective of this White Paper is therefore to outline the most feasible and practical framework and potential approaches of transforming South Africa’s food system away from ASFs towards Alternatives with the main emphasis placed on law and policy. It is also to place pressure on Government to take swift and affirmative actions for such transformation with an active call on relevant departments to follow two distinctive “Avenues” to achieve this:

(i) **Avenue 1:** The shift away from Animal Sourced Foods (ASFs) and systems relating to animal agriculture, specifically intensive and industrialised animal agriculture through:
a. Reduction in intensive animal agriculture and reliance on animal sourced foods;

b. Supporting well-regulated, less intensive animal production

with an ultimate goal to completely eliminate intensive and industrialised farming of animals.

(ii) **Avenue 2**: A shift towards Alternatives (with a focus for this White Paper on two specific Alternatives being Plant-based Alternatives and Cellular-based Alternatives and more specifically on protein or “meats” as compared to other products) (hereinafter “**Avenue 2**”), through supporting and facilitating increased production and accessibility of Alternatives.

It should be noted that there are various other Alternatives to intensified animal agriculture – including other methods of production (such as extensive systems); other alternatives (including for example precision fermentation); and alternatives to other ASFs such as eggs, dairy, honey, etc. These are outside the scope of this Working Paper.

**3. SCOPE OF RESEARCH AND METHODOLOGICAL APPROACH**

The Project entailed two main phases:


2. Phase 1: resulting in this White Paper.

The Working Paper consisted of the following elements:

A. A Legal and Regulatory Gap Analysis of the current animal and agricultural law and policy framework in South Africa and its capacity to address the harms of industrialised animal agriculture and to accommodate the growth of alternative proteins in South Africa’s food system;

B. Key Informant Interviews (KIIs) with stakeholders from across a spectrum of sectors who work in or interact with the food system in a variety of ways; and

C. A Public Survey of a representative group to demonstrate the extent to which the South African public is aware of the harms associated with animal agriculture in South Africa and the public perception of (i) farmed animal welfare and the health, environmental, and climate implications of our current farming systems; and (ii) alternative proteins and foods.

Based on the analysis and the barriers identified in the Working Paper, possible ways were identified to transform South Africa’s food system through legal and policy reform pathways to improve farmed animal welfare through public and private sector regulation; promote public awareness of farmed animal welfare and the intersectional impacts of industrialised agriculture in South Africa; and prepare South Africa for a transition towards Alternatives.

The Working Paper contains a more complete analysis and details in respect of the above aspects and should be consulted for further information. This White Paper contains an abridged version of selected issues and rather focuses on more concrete and definitive pathways forward.

For purposes of this White Paper, the methodological approach can be summarised graphically as follows:
4. FORMAT

This White Paper is divided into two main Sections with additional Parts.

The main Sections and Parts are:

I. Section I: Laying the Groundwork
   A. Part I: Surveying the Landscape
   B. Part II: Digging Deeper
   C. Part III: Failure to Germinate

II. Section II: Sowing the Seeds
   A. Part I: Selecting the Seeds
   B. Part II: Planting the Seeds
   C. Part III: Taking Root

Given the enormity of the topic of food systems and their various intersections, the research and this White Paper is limited in scope and non-exhaustive of all relevant aspects. Notably, the Working Paper provided a much more detailed analysis of various issues and should be referenced for further information.

The focus for the Project is on the large scale, industrialised and intensive animal agricultural and production sector of traditionally terrestrial farmed animals in South Africa. More specifically, the Project focuses on certain key categories of animals being cows, pigs, and chickens and on practices such as caging and crating.

There are many species of animals farmed in South Africa and globally for various purposes – both wild (including among others lions, rhinos, ostriches, bucks, and others) and domestic (including among others ducks, geese, and other poultry, lambs and sheep, goats, horses, cattle, and others). There are also new and burgeoning areas – such as for example rabbit farming. Animals, their products as well as the by-products from farming them are also used in a variety of products.

The following aspects are not included for the purpose of this Project and accompanying research and analysis unless specifically referenced:
1. The farming of wild animals in South Africa including game and related products. This is a hugely complex area with massive implications for animals, the environment, and people. There are important historical discussions and intricacies that warrant further research.

2. The farming of insects including bees and animals used as food and feed. This is a significant area that warrants further research and attention, specifically as it grows in other countries around the world and furthermore as insects are continuously being seen and promoted as an “alternative” to the current animal production systems. Insects are furthermore an important aspect of other animal farming methods such as use in chicken feed and aquaculture feed among others. People also eat wild insects as a protein source.

3. The farming and breeding of animals for other purposes including but not limited to clothing (including wool, hairs including mohairs, skins and furs); decoration; medicinal components; companion animals; for entertainment and sports purposes, working animals or otherwise. Each of these areas raises intricate considerations, they have additional and specific regulations which apply to them, and warrant further research.

4. The farming and use of animals for consumption by other animals such as pet food. The pet food industry is relevant to the farming of animals and is an issue which warrants further research.

5. Wild caught fishing and aquaculture (although aquaculture is mentioned in one section for illustrative purposes). The South African Government has specific policies such as Operation Phakisa, which apply to these sectors. There are additional policies and laws that regulate these sectors. These areas also warrant further research and attention as they impact on the lives of millions of animals.

While the above aspects are important in the animal agricultural context and there is undeniable overlap, they are outside the scope of this White Paper unless specifically mentioned.

An additional aspect not directly covered are other alternatives including precision fermentation or other emerging techniques and methodologies such as 3D printing. Certain aspects of the research and proposals may be applicable to such alternatives but are not the direct focus.

As an organisation focused primarily on animal law, this is the predominant lens through which the White Paper has been drafted and should be considered, i.e., the centering of animals, their interests, and their intrinsic worth in the dialogue. While social justice and environmental protection are critical components of the work of ALRSA, more research has been done in these areas as there are already a number of important organisations focusing on these aspects. As such, this Project aims to fill a gap within food systems research to additionally include animals and their welfare, wellbeing and protection into this discussion, and the legal and policy tools which can be used to do this.

5. PROJECT DOCUMENTATION

The Project is registered on the Open Science Framework (OSF) and the documentation referenced in this White Paper can be found at the OSF Website here: https://osf.io/24wcz/. The Working Paper and White Paper can be accessed via the Animal Law Reform South Africa Website: www.animallawreform.org.

17 Operation Phakisa Website: https://www.operationphakisa.gov.za/Pages/Home.aspx
SECTION 1: LAYING THE GROUNDWORK
PART I

1. BACKGROUND

The forecasted growth in human population is anticipated to reach 9.8 billion in 2050 and 11.2 billion in 2100 globally.\(^{18}\) In South Africa, the population of South Africa will increase from 59 million in 2020 to 66 million in 2030 and 80 million in 2080.\(^{19}\)

This increase in the human population will see an increase in demand for food that will see all of the above-mentioned issues compounded in the production of food.

At 60 to 70 kilograms of meat per person per year,\(^ {20}\) South African's meat consumption patterns are ranked amongst the highest in the world and comparable to those of people in developed countries.

Whilst intensifying agriculture, particularly animal farming, has exponentially increased the amount of food produced and its accessibility to the growing human population, it has come at a great cost to animals, humans, and the environment. While these are expanded on elsewhere in this White Paper, briefly these include but are not limited to:

(i) Animals: compromised wellbeing, welfare, and health; and

(ii) Humans: food safety, diseases, and health issues (including health conditions, chronic diseases (such as Type II diabetes, chronic heart conditions and obesity), cancer and increased incidences of zoonotic diseases and antimicrobial resistance); Social issues (around inequality, unfair practices, lack of transparency and information and impact on environment); consumer protection and impact on vulnerable populations; and

(iii) Environment and its natural resources (soil, air, and water pollution): resource use and allocation and climate change (for example through greenhouse gas emissions of methane from the animals and emissions from pastures, ranges and paddocks).

Overall, South Africans over rely on animal-based protein and products, majority of which come from intensive animal agriculture. Bovine products constitute 40% of the animal foods, poultry meat and eggs 39%, followed by ovine and caprine products constituting 10% combined.

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\(^{19}\) https://www.un.org/en/global-issues/population

The gross value of animal products contributes over 40% to the total gross value of agricultural production.\textsuperscript{21} In order to support such an offtake, \textbf{over one billion land animals alone are slaughtered annually.}\textsuperscript{21}

There are approximately 32,000 commercial farmers in South Africa, over 5000 of which produce approximately 80 percent of agricultural output.\textsuperscript{22} The Land Audit\textsuperscript{23} revealed that Whites own 26 663 144 ha or 72% of the total 37 031 283 ha farms and agricultural holdings by individual landowners; followed by Coloured at 5 371 383 ha or 15%, Indians at 2 031 790 ha or 5%, Africans at 1 314 873 ha or 4%, other at 1 271 562 ha or 3%, and co-owners at 425 537 ha or 1%. Males own 26 202 689 ha or 72% of the total farms and agricultural holdings owned by individual owners; followed by females at 4 871 013 or 13%.

Approximately half (49.2\%) of the adult population are living below the upper-bound poverty line.\textsuperscript{24} Approximately 55.5 percent (30.3 million people) of the population is living in poverty at the national upper poverty line (~ZAR 992) while a total of 13.8 million people (25 percent) are experiencing food poverty. The prevalence of overweight and obesity in South Africa is 68\% for women and 31\% for men.\textsuperscript{25} Globally in 2018, Livestock production processes such as enteric fermentation and manure deposition on pastures dominated farm-gate emissions, together generating 3 billion tonnes of CO\textsubscript{2}eq.\textsuperscript{26} South Africa’s emission factors are higher than values from other African countries and ranks high in the world.

With these statistics in mind, it is imperative to transition away from intensive animal agriculture in order to ensure protection for animals, humans and the environment, human health, preserve our natural resources and reduce the country’s carbon footprint and the attendant climate change implications. Transitioning is clearly not just a good thing to do but an existential concern for whole nations and economies.

\section*{2. THE CURRENT PARADIGM: ASFs}

In South Africa and beyond, agriculture is the backbone of food and nutrition security. The South African Agricultural sector is highly diversified and includes farming and processing of all the major grains, oil seeds, seeds, deciduous and subtropical fruits, sugar, citrus, wine, most vegetables and livestock species of cattle, dairy, pigs, sheep, broilers, egg laying chickens and ostriches.\textsuperscript{27} Livestock contribute 48\% to agricultural production followed by horticultural crops (28\%) and field crops at 22\%.\textsuperscript{17}

South Africa is predominantly a meat-eating country, with meat forming an integral part of the South African cuisine. At 60-70kg/per person per annum, South African’s meat consumption is over four times the continental average of 13.1kg\textsuperscript{28}

Of the meat types, poultry is consumed the most relative to beef, pork, mutton, and goat meat. The survey results from the Working Paper Survey demonstrated that (94\%) participants consumed chicken; 71.9\% pork; 87.7\% beef; 17.0\% veal; 23.9\% duck; 27\% game meat and 41.6\% goats.\textsuperscript{29}

\textsuperscript{24} https://www.statssa.gov.za/?p=12075
\textsuperscript{25} https://defeat-ncd.org/new-reports-south-africans-now-most-likely-to-die-from-ncds/
\textsuperscript{26} Emissions due to agriculture; https://www.fao.org
\textsuperscript{27} Statistical data extracted from: https://www.fao.org/faostat/en/#data/QCL
\textsuperscript{28} Statistical data extracted from: https://www.fao.org/faostat/en/#data/QCL
\textsuperscript{29} Statistical data extracted from: https://www.fao.org/faostat/en/#data/QCL
The general trend is that of increased meat consumption due to population growth, rising income and urbanisation.

The meat industry in South Africa is well developed with advanced processing plants to provide for an assortment of animal-based meat products. Meat is therefore available to consumers in a diversity of products ranging from primary cuts, ground/minced meats, sausages, cold/deli meats, cured and dried amongst the many products. Such meat products are even accessible to consumers in the most remote areas of the country in villages and rural communities. Meat is served across a diversity of fast foods and restaurants that can be accessed by consumers across the income categories. In certain instances, ASF derived fast foods tend to be

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cheaper than plants or any other non-meat derived fast foods. Previous studies have indicated that healthy food costs more than junk foods, a scenario common in most countries globally. 31, 32

Although the smallholder communal farming is host to a significant proportion of livestock particularly cattle, goats and sheep, majority of the meat consumed in South Africa comes from the commercial sector that practises intensive animal production.33

South Africa has a good food value chain that spans from primary agriculture farming plants, animals, and fish to processing plants producing agricultural food by-products and a tertiary agriculture characterised by food marketing and food distribution channels. 34

South Africa has a good food distribution network that reaches even the most remote regions of the country due to a good road network system and cold chain distribution channels.19

The implications of such a diverse and well-developed agricultural food system value chain are that food can be accessible across all economic classes, across the geographic spread and available throughout the year.

Overall, South Africa produces enough food to feed itself and is net exporter of agricultural products.35 A significant proportion of crop farming is for production of feed for animal agriculture. Forty percent of the maize produced in the country is for animal feed.36

Despite the country being a net food secure nation, South Africa still experiences food insecurity in some pockets of the economy due to the high level of inequality. According to the UN FAO 2020 SOFI report, 720 and 811 million people in the world faced hunger in 2020, with 282 million of these residing in Africa.37

Despite access to food being one of the human rights well-articulated in the Constitution (Section 27), there is no strategy and adequate policies in place to ensure access to food is guaranteed for all people. According to Nkrumah, although the right to food under sections 27 of the constitution is a noble cause, its operationalisation has been hindered by several legal hurdles and two decades since its adoption, many South Africans continue to face abject poverty, endemic hunger, and malnutrition.38

As a basic need, food should be prioritised, with nutritional and sustainable food sources subsidised and prices regulated to ensure the general population can access it. The accessibility of food across all income groups will determine the possibility and extent to which South Africa can transition to non-animal based/sourced foods. Currently certain foods are considered as only for the rich and not accessible to the poor. In most instances the poor, who are the majority in the country, will just go for the most affordable food types. The prioritisation of subsidies and safety nets is important, as well as the use of taxes on direct-to-consumer plans in order to address

34 https://www.trade.gov/country-commercial-guides/south-africa-agricultural-sector
37 https://www.fao.org/3/cb4474en/online/cb4474en.html#chapter-2_1
the food needs of the most vulnerable and marginalised. This should be reinforced by supporting and assisting small-scale farmers to break the harmful monopolies of large-scale farms and intensive animal producing farms.

Meat production and consumption however has negative implications on animal welfare, human rights, and health and on the environment and climate change considerations.

3. THE ALTERNATIVE PARADIGM

A. Introduction

“Alternatives” broadly defined consist of a variety of products ranging from meats, eggs, milk, honey, gelatine and dairy products from non-animal sources which include from plants (Plant-based Alternatives), cultivated cells (Cell-based Alternatives) and even alternatives from fungi (e.g., mushrooms) or fermentation derived. They can also include different methods of production including 3D printing. However, this White Paper focuses only on Plant-based Alternatives, Cell-based Alternatives and more specifically as they relate to proteins or “meats” and not other products. Similarly, “Alternatives” are referenced throughout to include both Plant-based Alternatives, Cell-based Alternatives with a recognition that not all references should include both and some may reference only one. For example, as Plant-based Alternatives are already on the South African market and no Cell-based Alternatives are, appropriate discretion must be applied when interpreting such terms throughout this White Paper.

Alternatives to animal meat (or “meat alternatives”) are defined as “a manufactured food item which aims to be similar to meat by pointing out shared attributes and relations. They are also referred to as a meat substitute, meat analogue, vegetarian meat, [or] vegan meat.” These mimic the shapes, texture, and other attributes of animal-sourced meats. Alternatives are also increasingly including Cellular-based Alternatives. Meat Alternatives are increasingly becoming available to consumers and could circumvent the negative impacts of overdependence on ASFs. Meat Alternatives are often promoted as a means of mitigating the environmental, animal welfare, and, in some cases, public health problems associated with farmed meat production and consumption while appealing to mainstream consumers through existing supply chains. Alternatives to ASFs include plants of predominantly legumes but also some vegetable and grains and fruits, as well as mushrooms. Vegetables rich in protein include Soya, Seitan, Edamame, Pea, Mycoprotein (aka Quorn), Tofu, Tempeh, Lentils, Chickpeas and Hempseed.

These can also be referenced as “Meat Analogues”, which are defined in South African legislation as “meat substitute, mock meat, faux meat or imitation meat” and:

a) approximates the aesthetic qualities (primary texture, flavour, and appearance) and/or chemical characteristics of specific types of meat; and

b) are made from non-meat ingredients, sometimes without dairy products and are available in different forms (coarse ground-meat analogues, emulsified meat analogues and loose fill, etc.)

See https://www.igi-global.com/dictionary/marketing-meat-alternatives/62719


Regulations Regarding the Classification, Packing and Marking of Processed Meat Products Intended for sale in the Republic of South Africa, No, 1283 of 2019

NPC Number 2017/330930/08 | NPO Number 208-234 NPO
www.animallawreform.org
Although a relatively new concept, the acceptance of meat Alternatives in South Africa looks promising as indicated in previous studies, and by the survey from the Working Paper.

South Africa has a significant number of people who practise vegan diets, and this is growing. There are also a number of other African countries where veganism is growing. The last 2-3 years have seen an introduction and shift towards Plant-based Alternatives in the form of burger patties, soya mince, fish fillets, schnitzels, sausages amongst many other products.

**B. Plant-Based Alternatives**

Plant-based Alternatives can now be sourced in almost all the major grocery retailers of South Africa such as Pick ‘n Pay, Shoprite Checkers, SPAR and Woolworths and the country is already producing and promoting its own Plant-based meat and companies. Similarly, Plant-based Alternatives are now available in restaurants and in the fast-food industry with common fast-food retailers such as Burger King, Nandos, Wimpy, McDonalds, Spur, on a list that is fast growing.

The Working Paper Survey, indicated that a considerable number of South Africans are now familiar with Plant-based meats (52%), already consumed them (44%) or are willing to consume them (47.8%). These are positive results that demonstrate that the concept of plant-based meats in no longer new in the country and that it is feasible to transform the food system. However, there has been very limited and fragmented information dissemination and awareness campaigns around Plant-based and other alternative meats in South Africa, most of it driven by civic bodies with limited to zero participation by government institutions. There is therefore a call on all relevant stakeholders to play their part in bringing awareness and facilitating accessibility of Plant-based and alternative meats to the South African public.

**C. Cellular-based Alternatives**

Cellular-based Alternatives or cultivated meats is a relatively new concept in South Africa and on the African Continent, with only two companies (Mogale Meats and Mzansi Meats) currently involved in research and development of cultivated meats and one company (Sea-stematic) involved in seafood and fish in the country. None of these meats are currently sold in the country although earlier this year Mzansi Meats unveiled its first cellular based burger in April.

Mogale Meats which has debuted Africa’s first cultivated chicken, is planning on unveiling a new meat later this year and is also developing and prototyping a unique modular plug-and-play concept production plant that will allow cultivated meat to be made where the people are.”

Globally, Singapore is the only country with approved sale of Cellular-based Alternatives. However, many other countries have initiated processes and are on the pathway to the sale of such products. It is therefore simply a matter of time before these Cellular-based Alternatives are on market and available to consumers.

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43 https://mogalemeat.com/

44 https://www.mzansimeat.co/

45 https://www.bizcommunity.com/Article/196/162/226971.html

The Working Paper Survey showed that only 47.4% of the participants had heard about cultivated meats and thirty-nine percent of the participants were willing to try consuming cultivated meats for the following reasons: out of curiosity (53.9%), health reasons (22.7%); religious reasons (5.6%); personal beliefs (11.0%); animal welfare concerns (12.9%); environmental concerns (12.5%) and other reasons (3: 0.8%) that included wanting to try and enjoy something they are not sure of.

Those who will not want to try cultivated meats felt that way because they do not eat any meat whether it is cultivated or grown on farms (7.7%); did not consider Cellular-based Alternatives to be natural (37.6%); were concerned about the taste (12.7%); were concerned about the ingredients (17.3%); do not like the idea that it is grown in a laboratory (24.5%); were concerned about costs (14.5%); were concerned about the health effects (17.9%); amongst other reasons.

As with the results from the Working Paper Survey on Plant-based meats, these results demonstrate the feasibility of transitioning to Cellular-based Alternatives through overcoming barriers to transitioning that included cost, perceptions, culture, and religion amongst other deterrents.

4. CONCLUSION

The South African food system is complex, characterised by diversity in commodities, a dual food production system consisting of highly intensive commercial enterprises that supply the bulk of the food consumed and a smallholder-extensive production system, which is marginalised and partially feeds households.

The South African population over-relied on animal food sources, and this is further promoted by a well-developed animal agriculture sector that produces massive amounts of ASFs, diversity of animal-based food products and disseminate them broadly covering even the most marginalised groups of the population.

Plant sourced foods on the other hand, are sold primarily as primary products with little to no processing and value addition and are seasonal with a geographical association.

The current status quo is that Alternatives are associated with the middle class to elite groups of the economy, mainly due to high cost, unavailability, and inaccessibility. The GFI in their 2021 State of the Industry Report indicated that one of the major deterrents to consumption of alternative meats is the price parity with Plant-based meats being more expensive and unaffordable to ordinary consumers. The 2021 GFI State of the Industry Report indicated that several Plant-based meat companies had moved closer to price parity, though the gap is still significant. Mogale Meat, a South African based company, intends to feed a billion people with cultivated chicken meat.

The European Alliance for Plant-Based Food (EAPF) is calling on the international community and national governments to make plant-based diets a central part of global and national strategies to develop more sustainable, healthy, and equitable food systems, and to attain the UN Sustainable Development Goals.

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47 GFI State of the Industry Report | Plant-Based Meat, Seafood, Eggs, and Dairy 2
48 GFI State of the Industry Report | Plant-Based Meat, Seafood, Eggs, and Dairy
50 European alliances for plant based food (EAPF). 2021. Towards Predominantly Plant-based Food Systems Globally
Rethink Agriculture’s research shows that “By 2030, demand for cow products will have fallen by 70%. Before we reach this point, the U.S. cattle industry will be effectively bankrupt. By 2035, demand for cow products will have shrunk by 80% to 90%. Other livestock markets such as chicken, pig, and fish will follow a similar trajectory.”

This will have significant positive technological, economic, food security, environmental and animal welfare and wellbeing spin-offs for countries that embrace the transformation. Rethink Agriculture posits that modern foods will be superior and cheaper than animal derived foods, land used for animal production will be freed for other uses, net greenhouse gas emissions in the United States will fall by 45% by 2030, food engineered by scientists will “result in a far more distributed, localized, stable, and resilient food-production system”. Significant health benefits will accrue from better nutrition, and there will be “reduction in foodborne illness and in conditions such as heart disease, obesity, cancer, and diabetes.”

It is important for South Africa to be cognisant of global developments and the growing shift away from ASFs and be proactive.

Rather than promoting harmful industrial animal farming methods of food production, South Africa should promote Alternatives and explore new technologies. While other countries have had to learn the difficult way from decades of animal agriculture of the various harms, before such systems become too deeply entrenched in the nation, South Africa may potentially take advantage of leapfrogging over them. “Leapfrogging occurs when a nation bypasses traditional stages of development to either jump directly to the latest technologies (stage-skipping) or explore an alternative path of technological development involving emerging technologies with new benefits and new opportunities (path-creating).”

There appears to be a willingness of the population to transition towards diets that are less reliant on ASFs, and more reliant on Alternatives. However, in order for this to happen there are a number of barriers to overcome.

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51 See: https://www.rethinkx.com/food-and-agriculture
52 Ibid
53 Ibid
54 https://www.csis.org/analysis/need-leapfrog-strategy
1. INTRODUCTION

Based on the analysis from the Working Paper, this Part II highlights selected “Identified Key Issues” within the food system for consideration. These Identified Key Issues are subsequently grounded in the South African context, and where possible linked to specific Constitutional Rights which are implicated by them. In the final step, a brief analysis of each Identified Key Issue is then provided for in the context of each (i) ASFs and (ii) Alternatives.

These Identified Key Issues and subsequent observations and potentials are non-exhaustive as they relate to the food system and are intended to serve as a base for comparative analysis. Specific emphasis is placed on critical observations on the current ASF paradigm and potential positive benefits of Alternatives.

It is not the focus of this Part nor White Paper to highlight potentially positive or perceived benefits relating to ASFs nor an analysis of the potential negative impacts or considerations relating to Alternatives. Such analysis is relevant and must be properly considered but is outside the scope of this White Paper.

The current dominance of intensive farming, particularly animal agriculture, in the food system is driven by the need to provide more food to feed the growing human population cheaply. Additionally for South Africa, intensive animal agriculture is seen as a strategy to address poverty and economic growth within the National Development Plan. However, such an approach has led to a plethora of consequences which impact on guaranteed Constitutional Rights. There are a number of issues within the South African food system and its regulation which could be highlighted. For the purposes of this White Paper, the focus is on the problems and shortcomings with the regulation of the animal agricultural and production industry and the failure to properly provide for an alternative paradigm.

These consequences and potentially relevant issues have been classified for purposes of the White Paper into the following “Identified Key Issues”:

1. Governance and Regulatory Failures and Shortfalls
2. Environmental Aspects
3. Health and Food Safety
4. Animal Interests and Protection
5. Human Rights and Social Justice
6. Accountability and Transparency
7. Economic Considerations, International Obligations
2. DISCUSSION ON IDENTIFIED KEY ISSUES

A. Identified Key Issue: Governance and Regulatory Failures and Shortfalls

i. Grounding

This Identified Key Issue has been identified as one of the most significant for purposes of this White Paper given the Project’s focus on law, policy, and the role of government. Such Identified Key Issue accordingly connects directly to all other remaining Identified Key Issues. There are various governance and regulatory failures and shortfalls across the spectrum, some of which have been further discussed in the Working Paper and a few of which are expanded on herein.

Section 27(1)(b) of the Constitution states that everyone has the right to have access to sufficient food and water and it furthermore states in 27(2) that the state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights. This places a direct obligation on the Government to ensure this right is achieved.

Section 33 of the Constitution is the Right to Just administrative action which states that:

1. Everyone has the right to administrative action that is lawful, reasonable, and procedurally fair.
2. Everyone whose rights have been adversely affected by administrative action has the right to be given written reasons.
3. National legislation must be enacted to give effect to these rights, and must
   a. provide for the review of administrative action by a court or, where appropriate, an independent and impartial tribunal;
   b. impose a duty on the state to give effect to the rights in subsections (1) and (2); and
   c. promote an efficient administration.
Chapter 3 of the South African Constitution speaks to Co-operative Governance\(^55\) which requires among other things that “All spheres of government and all organs of state within each sphere must h. co-operate with one another in mutual trust and good faith by co-ordinating their actions and legislation with one another (Section 41: Principles of co-operative government and intergovernmental relations at (1)(h)(v)).”

\[\text{ii. ASFs Observations}\]

The currently regulatory framework as it pertains to ASFs, and animal production fails to comply with the obligations placed on the State in terms of the Constitution. While Government has policies and legislation relating to the right to food, such policies heavily focus on the intensification of industrialised animal agriculture without adequate consideration of the harmful impacts of such industries, and without simultaneously exploring or promoting alternative options, including Alternatives.

Regulation fails to be properly aligned, including at a national level as well as with South Africa’s international obligations and there is insufficient co-ordination between departments and different levels of government.

In the context of animal agriculture, it is concerning and extremely problematic that the government department tasked with animal welfare, is the same department tasked with promoting animal production (DALRRD). This department has failed to properly regulate for animal welfare including failure to promulgate specific standards, as well as to enforce existing animal legislation. This has led to a proliferation of soft law which needs to be addressed. Whilst important as guiding principles, soft law is not binding, and its proliferation is a manifestation of a lacuna in the available legal and regulatory framework. There is therefore a need for holistic regulation that complies with international standards and national goals, for example on climate change.

\[\text{iii. Alternatives Potential}\]

At present, no specific regulation exists for Alternatives. There is no clear regulatory regime to govern critical aspects of either Plant-Based Alternatives or Cellular-based Alternatives. While certain existing regulations apply to such products, there is a failure by government to properly legislate for key issues relating to (among other issues) the naming, and labeling of such products, food safety standards, environmental standards, and others. This is troubling given that the development of Cellular-based Alternatives is imminent in South Africa and the regulation of such products potentially straddle the mandates of several government departments ranging from DARLRRD, to DoH to DTIC.

One of, if not the only specific administrative action relating to Alternatives which government has released, is the Communique issued by the Executive Officer of Agricultural Product Standards dated 22 June 2022.\(^56\) This Communique was addressed to all processors, importers and retailers of meat analogues advising them not to use legislated processed meat labels to mark or label meat analogues and threatened seizure of any such labelled products. While this decision and subsequent communications was challenged by the Consumer Goods Council of South Africa (CGSA) which successfully obtained a temporary interdict on seizures until November, it indicated a problematic approach by the DALRRD to such products as there was no proper engagement with the Alternatives industry prior to the issuing of the action nor were there efforts to regulate such products.

This Communique caused more uncertainty for the Alternatives industry both locally and internationally and impacted on consumer’s rights, including those who had been purchasing such products and brands for decades.

\(^{55}\) https://www.gov.za/documents/constitution/chapter-3-co-operative-government

\(^{56}\) https://www.foodfocus.co.za/assets/documents/Communique%20to%20the%20stakeholders%20of%20meat%20analogues%20-%20June%202022.pdf
The decision was made in terms of the Agricultural Product Standards Act, (Regulations Regarding the Classification, Packing and Marking of Processed Meat Products Intended for Sale in the Republic of South Africa, 1283 of 2019) but without adequate consultation or advance notice to the affected actors. Such an administrative action is challengeable on various bases including the issue of lack of consultations.

While Plant-based Alternatives are more firmly entrenched in the South African market, and regulation must factor in the existing reality of such products, Cellular-based Alternatives are not yet on market.

Establishing a pre-emptive regulatory regime where all relevant stakeholders including the Alternatives industry are involved is critical. Such regime should speak to relevant food, environmental, health, consumer protection and other factors. This ranges from the labelling of such products to ensuring food health and safety.

South Africa has the opportunity to provide for a well-regulated Alternatives industry which may result in economic opportunities for the country including in relation to the exporting of such products.

B. Identified Key Issue: Environmental Aspects
   i. Grounding

Section 24 of the South African Constitution contains the Right to Environment and states that:

“Everyone has the right

   a. to an environment that is not harmful to their health or well-being; and
   b. to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that:

      i. prevent pollution and ecological degradation;
      ii. promote conservation; and
      iii. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”

Section 27(1)(b) of the South African Constitution, states that “everyone has the right to have access to sufficient water”.

South Africa has a robust environmental regulatory framework based on the constitutional right to environment, which presents several opportunities for addressing harmful activities associated with existing intensive animal agriculture and in order to achieve greater protection not only for humans and the environment, but nonhuman animals too.

South Africa also has international obligations in terms of treaties, including but not limited to the Paris Agreement. In terms of the Paris Agreement South Africa has set targets, or nationally determined contributions (NDC) for climate change mitigation – it submitted its revised NDC to the United Nations in 2021 with the result that “the country commits to a fixed target for greenhouse gas emissions levels of 398-510 MtCO2e by 2025, and 350-420 MtCO2e by 2030, compared to 398 and 614 Mt CO2e between 2025 and 2030 as communicated in the first NDC.”

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United Nations Development Programme Global Climate Promise, ‘South Africa’, available at: South Africa | Climate Promise (undp.org) (last accessed 4 October 2022)
Research shows that large-scale animal agriculture significantly contributes towards greenhouse-gas emissions, habitat destruction, pollution and loss of biodiversity. Current food production and dietary choices have also been linked to biodiversity loss, and destruction of ecosystems. Up to this point, despite the far-reaching and known harms of animal agriculture, environmental law has been an underutilised avenue when it comes to tackling harmful food systems but this area warrants further research and analysis.

ii. ASFS Observations

Whilst intensive animal agriculture attempts to address issues of food security, poverty, transformation, inequality and livelihoods – it is unsustainable as it comes at a tremendous cost to the environment, human health and welfare and animal health and welfare.

Agriculture has a significant water footprint with close to one-third of the total water footprint of agriculture in the world related to animal farming and product development. The water footprint of any animal product is larger than the water footprint of crop products with equivalent nutritional value.

South Africa is a water scarce country and ranks as one of the 30 driest countries in the world with an average rainfall less than 500 mm, while that of the rest of the world is 850mm.

Animal agriculture is the greatest agricultural cause of water pollution and associated negative impacts on ecosystems and water sources. Animal excreta, antibiotics and hormones, fertilizers and pesticides used in forage production, and rainfall runoff from pasture all contribute to water pollution.

Industrialised livestock production furthermore uses a significant amount of land surface with tremendous and detrimental impact on both land availability and soil health. About 26% of the Earth’s ice-free land is used for livestock grazing, and one-third of the planet’s arable (farmable) land is occupied by crops for livestock feed. From a land rights and access perspective, this impacts the most vulnerable and marginalised such as women, as they lose land to CAFOs or have CAFOs built adjacent to their land. Research shows that in picking sites “industry or government simply follow the “path of least resistance” in choosing sites where people [are] less likely to object or land [is] cheap” and this is always land belonging to the poor, vulnerable, marginalized, amongst them women, minorities, indigenous and black people.

61 HEALabel, ‘Water Footprint of Food List’, available at: https://www.healabel.com/water-footprint-food-list/#:~:text=The%20water%20footprint%20of%20an%20animal%20product%20is,pound%20of%20cowpeas%2C%20%20relatively%20high%20water%20footprint. (last accessed 16 October 2022)
62 https://www.dffe.gov.za › South Africa: a water scarce country - Environmental Affairs
65 Wendee Nicole, ‘CAFOs and Environmental Justice: The Case of North Carolina’ available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3672924/ (last accessed 7 October 2022)
Livestock overstocking in both communal and commercial areas has been associated with soil erosion and land degradation. Livestock production through grazing accelerates soil erosion that occurs when grasslands are subject to extensive grazing without sufficient recovery periods. Soils are damaged by the animal hooves when they graze on the same land area. In addition, the removal of vegetation for livestock activity exposes the soils to water and wind making it more vulnerable to erosion.

Animal agriculture has a major impact on biodiversity generally as well as wild animals. It is connected to ocean dead zones, biodiversity loss, animal extinctions, and habitat fragmentation among others. A large number of predators are killed for attempting to eat animals farmed for food including but not limited to jackals, caracals and leopards.

Animal agriculture contributes more to climate change through agriculture’s emissions that come from conversion of forests and prairies to pasture and cropland, production of animal feed, and animal digestion and waste decomposition.

In light of the phenomenal impacts of industrialised animal agriculture, jurisdictions around the world are increasingly recognising these links and implementing progressive environmental protection.

The production and consumption of Alternatives can address or mitigate several issues posed by ASFs and their production.

The UN has long identified the links between the industrialization of livestock operations and malnutrition, set out extensively in the Interim Report of the Special Rapporteur on the Right to Food, presented to the UN General Assembly on 5 August 2015. These include recognitions that:

1. Climate change and food policy are complicated inter-related fields. Hunger and malnutrition are a function of social and economic problems, not production. Food security and adaption to climate change are mutually supportive policy outcomes, and policy makers thus need to consider the issues together.

2. The trend towards intensive industrialised livestock production needs to be arrested and reversed, to reduce the impact of the sector on the environment generally, and on anthropogenic emissions in particular, and to improve food security, economic development, social justice and ethics. There is a need to encourage a major shift from current industrial agriculture to transformative activities such as conservation agriculture (agro ecology) that support the local food movement, protect smallholder farmers, empower women, respect food democracy, maintain environmental sustainability and facilitate a healthy diet.

3. The pivotal roles in food production of smallholder farmers, women and indigenous and local communities must be recognized and protected and their acute vulnerability to climate change acknowledged.

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66 [https://www.farmersweekly.co.za/bottomline/taking-action-on-predator-control/](https://www.farmersweekly.co.za/bottomline/taking-action-on-predator-control/)
68 Interim report of the Special Rapporteur on the right to food, UN General Assembly, 5 August 2015
69 Ibid
70 Ibid
71 Ibid
iii. Alternatives Potential

Growing scientific consensus has established that substantial shifts toward Plant-based diets, particularly in high meat-consuming countries, are essential for meeting climate change mitigation targets.72

In line with this scientific reality, for the first time ever the Paris Agreement Conference of the Parties 27 (COP27) being held in Sharm el-Sheikh, Egypt from 6 – 18 November 2022, recognises the importance of transforming food systems in order to meet climate change targets. COP27 which will be held under the slogan “Together for Implementation” will have food systems pavilions bringing together actors from government, civil society, industry as well as farmers, youths, policymakers and scientists to “tackle trade-offs, showcase solutions, and overcome barriers.”73

There is consensus that climate targets cannot be met unless the world changes the way it produces, processes, distributes and consumes food. The Report of the Intergovernmental Panel on Climate Change also makes clear links between the natural world and humans and in particular, the impact of climate change on ecosystems and biodiversity, on human health/pandemics, food/nutrition as well as the health, wellbeing and changing structures of communities.74

According to the GFI, “The current system of industrial animal agriculture is responsible for 20 percent of annual greenhouse gas emissions, more than the entire transportation sector, and demand for meat is set to double by 2050 as the global population grows. Even if all fossil fuel emissions stopped immediately, animal agriculture alone would push the planet past 1.5°C of warming. Alternative proteins reduce greenhouse gas emissions by up to 97 percent by creating the characteristics of animal products using plants, fermentation, or animal cell cultivation. Pastures and fields of feed crops currently occupy nearly a third of Earth’s land, so in addition to reducing emissions, a transition to alternative proteins would also unlock hundreds of millions of square miles of land for carbon sequestration, with potential sequestration as high as 26 Gt/year,6 which is roughly half the annual human production of CO2-eq.”75

C. Identified Key Issue: Health and Food Safety

i. Grounding

South Africa has both international and national obligations to provide for and ensure food safety standards which are included in various treaties and national legislation.

ii. ASFs Observations

Animal Sourced food (ASFs) account for the majority of the non-communicable diseases.76

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72 https://www.ipcc.ch/srccl/chapter/summary-for-policymakers/ (accessed 6 September 2022)
74 Intergovernmental Panel on Climate Change ‘Sixth Assessment Report: Fact Sheet’, available at: https://www.ipcc.ch/site/assets/uploads/2022/04/AR6_Factsheet_April_2022.pdf (last accessed 7 October 2022)
Meats produced under intensive production systems are subjected to health interventions that include use of antibiotics and vaccines that contribute to antibiotic resistance in humans who consume such by-products. As stated above, the World Health Organisation (WHO) has noted that higher consumption of meat, particularly processed meat, leads to higher risks of several cancers. Animals share certain diseases with humans. There has been an increase in the incidences of such zoonotic diseases recently. The 2017–2018 South African listeriosis outbreak was a widespread eruption of *Listeria monocytogenes* food poisoning that resulted in 1,060 confirmed cases of listeriosis, and about 216 deaths.

The WHO recognises the One Health Concept which posits that “health of humans, animals, and ecosystems are closely interlinked. Changes in these relationships can increase the risk of new human and animal diseases developing and spreading.” As a result diseases emerge and spread due to human activities and stressed ecosystems, and to address these, the WHO recommends the need for “close collaboration, communication and coordination between the relevant sectors” and the need to optimise the health of animals, humans and ecosystems by integrating rather than keeping them apart.

In addition, given the high levels of obesity in South Africa, a high burden of diet related diseases such as heart disease, Type 2 diabetes mellitus, stroke and some cancers, changing eating habits is critical. Fast-food made from predominantly ASFs are cheaper and more accessible to the general public than healthier take-aways thereby promoting poor eating habits amongst the greater population and predisposing it to these lifestyle diseases. The South Africa Food Based Dietary Guidelines though allowing some foods from animal sources to be eaten as part of a balanced diet, encourage people to ensure that most of their eating plan consists of food from plants.

### iii. Alternatives Potential

Given the vast harms from ASFs, Alternatives offer many potential food safety and human health benefits including reduced risks relating to zoonotic diseases, anti-microbial resistance and reduce the risks of pandemics.

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79 https://www.who.int/news-room/fact-sheets/detail/zoonoses
81 World Health Organisation, ‘One Health: Key Facts” available at: One health (who.int) (last accessed 9 October 2022)
82 Ibid
D. Key Identified Issue Animal Interests and Protection

i. Grounding

Animals are legally considered as property and are not explicitly mentioned in the context of rights in the South African Constitution. Human rights tend to be seen differently from animal welfare and wellbeing.

For example, only when an animal interacts with the environment is it considered to be part of environmental law (e.g. wildlife or game animals). This has the effect of limiting the protections that are available to animals. It is well documented that animals utilised in industrial animal agricultural operations are subjected to cruel and inhumane treatment and practices throughout their lives and in their death.

In addition, laws such as the Animal Protection Act (Act 71 of 1962) fail to recognize the sentience of animals and contain only negative obligations towards animals with no positive legal standards. A further issue relates to the enforcement of laws to prevent cruelty and despite cruelty occurring daily in agricultural activities on a mass scale, little to no prosecutions are initiated and rarely, if ever, successful. There is no transparency around practices and the public is largely unaware of practices routinely done to farmed animals to produce food. This further erodes the protection that should be accorded to animals.

With this realisation, the jurisprudence that is emerging from the courts and the interpretation of the Constitution that is being provided by academics in order to address animal issues from a rights approach are important. In 2016, the highest court in South Africa, the Constitutional Court explicitly recognised both the sentience and intrinsic value of individual animals. In this case, the Constitutional Court held that “Animals have shifted from being “mere brutes or beasts” to “fellow beasts, fellow mortals or fellow creatures” and finally to “companions, friends and brothers”. This ruling was important in elevating the status of non-human animals vis a vis human animals, and is an important building block in the fight for better and improved legal protection for animals in the country.

In industrialised animal agriculture, nonhuman animals are treated as mere commodities and units of production. This is evidenced by the use of specific terms such as “units” in statistical and other information as well as practices which are inherent to such a type of farming.

It is apparent that the statements by the Constitutional Court and subsequent courts have not been properly captured into the regulatory framework impacting animals. The governmental entity responsible for the welfare of non-human animals (the Department of Agriculture, Land Reform and Rural Development) continues to support and promote harmful industries and practices relating to these non-human animals, as its focus is more on increasing animal production. Yet, there is a need to consider the creation of a sustainable food system that takes into consideration the interests of both human and non-human animals and is informed by the realities of the negative implications of an animal-protein centred food system on both animal and non-human animals.

This must be considered from the perspectives of environmental damage (pollution, climate change and biodiversity loss), health, welfare and wellbeing (for both human and non-human animals), rights (for both human and non-human animals) as well as economic development and social justice. Focus in this regard should be on compliance and enforcement, definitive and holistic regulation, allocation of resources for research and

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86 National Society for the Prevention of Cruelty to Animals v Minister of Justice and Constitutional Development and Another (CCT1/16) [2016] ZACC 46; 2017 (1) SACR 284 (CC); 2017 (4) BCLR 517 (CC) (8 December 2016) http://www.saflii.org/za/cases/ZACC/2016/46.html Para 56 and 57
87 Ibid
development, as well as for enforcement. Principles of transparency, accountability, public participation and consultation must be prioritised in the process.

The current food system is premised on industry and government messaging asserting that food security is only possible in South Africa by expanding intensive animal production. This assertion ignores the uncosted negative externalities and is thus flawed. Government should not push the intensive animal farming agenda without putting in place legislative measures to regulate how this should be done. If adequate regulatory measures are to be put in place first, then the government would realise the impact of intensive agriculture on animal wellbeing and welfare, the environment and human health and rights, leading to different policy and legislative approaches on the matter. However, largely Government fails to take cognisance of issues and objections raised and less so from animal protection organisations.

All of the rights in the Constitution are human / anthropocentric and not from an animal wellbeing or interest perspective. They do however provide an important starting point in addressing both human and non-human animal wellbeing, welfare and interests including by addressing anthropogenic activities which are harmful to or have an impact on various stakeholders.

The animal welfare approach is not necessarily a negative viewpoint, but it should be viewed only as an incremental measure and a more progressive approach must be developed in future so as to provide stronger and better protections for animals in the country. This is because, as it stands, the animal welfare approach neither historically nor currently provides adequate protection to animals, as it reinforces cultural, religious and social beliefs that view animals as resources or property available for the use, benefit and exploitation by humans.88

This means that animal welfare efforts ultimately sanction the use and (and abuse) of animals provided that certain minimal criteria should be met. Terms such as the “humane” killing of animals, favour an approach where the presumption is in favour of use. However, protecting animals’ interests should be premised on their sentience and an understanding of an animal having intrinsic worth as an individual. This entails being free from commercial exploitation by humans and for them to exist for their sake and not only (or necessarily) for the benefit of human beings.

ii. ASFs Observations

The increased demand for ASFs including meat is driving animal farming towards more intensive farming systems that compromise animal health and welfare. Intensive animal farming also known as factory farming has immense negative implications on animal welfare and health. Felix and Green89, defines factory farming as an intensive livestock production system that maximizes output while minimizing cost. In an effort to achieve mass production within short turnaround times, animals’ natural life cycles are disregarded and often animals are abused.

Animals reared under intensive farming are confined in small spaces with restricted movement. To minimise cannibalism and facilitate easy animal handling, beaks, tails and horns are removed in a manner that violates

animal welfare, wellbeing and interests. Additional mutilations are done to animals for different reasons including for example castration often with no anaesthesia or numbing prior to such procedures.

Because of the intensive form of production, ammonia and toxic products of animal excretion accumulate in the animal housing causing animals harm and distress. The Working Paper Survey demonstrated two things (i) that the public have limited knowledge on the practices that happen in the production of meat they consume and (ii) that ethics, and the concerns around animal welfare and health are some of the major reasons people would opt out to practice vegetarian diets and would want to shift their diets towards Plant-based and other meat Alternatives.

Currently, there are no specific or very limited animal-centric requirements in law relating to the welfare of animals in animal agricultural facilities. While there is the Animals Protection Act, this does not specify positive standards for animals in line with their needs. The Meat Safety Act and regulations designate some welfare provisions however by and large these relate to food safety requirements. SABS SANS are not legally binding and wholly deficient at accounting for the welfare and other needs of the animals implicated in animal agriculture. Industry standards are also voluntary. DALRRD does not properly enforce laws and this is largely left up to the NSPCA to do, which is an NGO with no government funding, which is under-resourced and suffers from other structural and practical challenges.

In many ways the animal regulatory framework is inadequate and South Africa has largely been left behind the international and foreign developments and best practices which are in place. There are very few specific practices banned, which is particularly important in the farmed animal context where other jurisdictions have taken active measures to ban and phase out cruel practices based on evidence such as sow stalls,veal crates and caged hens. The current framework does not adequately protect all animals, either explicitly excluding some from the legislation or by virtue of societal and other factors, with certain animals receiving unequal and less attention and consideration.

iii. Alternatives Potential

Alternatives present a model where animal use and exploitation is greatly minimised. This will save the lives of millions and potentially billions of animals every year.

Plant-based Alternatives do not include animal products, although some animals may be implicated in the production of growing crops to make them. Cellular-based Alternatives require the harvesting of cells from animals,although animals do not need to be killed and it can be done with anaesthesia. Methods of producing Cellular-based Alternatives which utilise fetal bovine serum (FBS) still involve animal cruelty and death and must be avoided. Internationally, Cellular-based Alternative companies such as Mosa Meats,901 have been able to remove FBS from their production methods. South African Cellular-based Alternative companies should also be required to do so to reap the full spectrum of potential benefits relating to such products and to ensure animal interests are factored into the new paradigm.

E. Identified Key Issue: Human Rights and Social Justice

i. Grounding

The Constitution has an extensive Bill of Rights that addresses human rights issues that are relevant to rights protection in the context of transforming South Africa’s food system, including but not limited to:

1. The right to human dignity;\(^\text{91}\)
2. The right to life;\(^\text{92}\)
3. Freedom and security of the person;\(^\text{93}\)
4. The right to an environment that is not harmful to one’s health and wellbeing;\(^\text{94}\)
5. The right to healthcare, food and water;\(^\text{95}\)
6. Freedom of religion, belief and opinion;\(^\text{96}\)
7. Freedom of trade, occupation and profession;\(^\text{97}\) and
8. Labour rights,\(^\text{98}\) amongst others.

Certain of these rights have been dealt with in previous sections. The process of protecting human rights and advancing social justice in the context of South Africa’s food system needs to be addressed from the realisation that there is a divide between animal justice issues, environmental justice issues and social justice and human rights issues. This is due to many systemic issues as well as various entrenched perceptions and misunderstandings that South Africans have towards ASFs. It also needs to happen within the context of South Africa’s history, the massive economic divide and the extreme poverty. An overhaul of the food system will certainly feed more people, but this cannot happen from a place of privilege and must protect the needs and interests of vulnerable groups and previously disadvantaged individuals. This is a complex issue with no easy answers, however the current paradigm fails to holistically view justice and therefore fails to achieve it and when building a new paradigm, this must be explicitly recognised.

ii. ASFs Observations

There are numerous issues impacting on social justice in the current food system and impacts on vulnerable groups – this ranges from members of the public including women and children to workers. It also includes issues such as transformation and land ownership when considering the current realities in the country.

In the animal production system, there are human rights implications for workers who may experience negative psychological impacts from witnessing violence against animals. Workers’ health is impacted by interactions with animals (zoonotic diseases). In many instances, polluted water and destruction of fertile soil is also a women’s rights issue as women are often in charge of smaller subsistence farming supporting household consumption and thus this affects their livelihoods directly. Where water systems have become polluted due to intensive animal agriculture, this can extend to the reproductive rights of women and girl children. Many women

\(^{91}\) Constitution of South Africa, Section 10
\(^{92}\) Constitution of South Africa, Section 11
\(^{93}\) Constitution of South Africa, Section 12
\(^{94}\) Constitution of South Africa, Section 24
\(^{95}\) Constitution of South Africa, Section 27
\(^{96}\) Constitution of South Africa, Section 15
\(^{97}\) Constitution of South Africa, Section 22
\(^{98}\) Constitution of South Africa, Section 23
and girl children do not have access to menstruation products and rely on cloths etc. which they must wash and reuse, and when water is not clean, they then risk infection.

**Example: Violence: Women’s Rights and Gender-Based Violence**

The right to freedom and security of the person as contained in the South African Constitution, includes the right to be free from all forms of violence from either public or private sources. The animal production system is premised and reliant on violence towards and death of billions of sentient animals per year. Importantly, the protection of animals has been shown to have a spinoff effect on the rights of humans. For example, research shows that “efforts to reduce cruelty to animals are likely to reduce the tolerance that communities have for interpersonal violence.”99 This is particularly important for South Africa which is currently ranked as one of the most violent countries in the world outside of a war zone100 and the President has referred to gender-based violence in the country as the second pandemic101 (to COVID-19).

Gender Based Violence has a negative impact on the country’s economic development and gross domestic product; causes mental and physical harm to victims and perpetrators alike; and in extreme cases, causes death. Laws to prevent violation of animal wellbeing should therefore take this into consideration, given the positive role that reduction of violence generally and GBV in particular will have on human health and well-being as well as the economic development of the country.

iii. **Alternatives Potential**

Due to entrenched and systemic issues within current ASFs production systems, South Africa can learn and do better when building a regulatory regime for a new industry, such as Alternatives. Government therefore has an opportunity to build social justice as a core design component into the regulation of the Alternatives industry. It may also learn from other existing industries for which it can only reform through incremental changes.

The Alternatives industry has the ability to be more just and inclusive at the outset and may not be subjected to entrenched inequalities existent in animal agriculture and industrial animal agriculture models. Specific recommendations as to how this may be achieved are included in the Recommended Interventions section.

**F. Key Identified Issue: Consumer Protection, Transparency and Accountability**

i. **Grounding**

Section 32 of the Constitution states that everyone has the right of access to any information held by the state; and any information that is held by another person and that is required for the exercise or protection of any rights. Furthermore, it requires that National legislation must be enacted to give effect to this right and may provide for reasonable measures to alleviate the administrative and financial burden on the state.

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99 Parliament of The Republic of South Africa ‘Notice of Intention to Introduce a Private Member’s Bill and Invitation for Comment on the Draft, Namely The Animals Protection Amendment Bill, 2020’ Animals Protection Amendment Bill: Private Member’s Bill into Parliament: Comments invited (juta.co.za) (accessed 3 September 2022)
100 BusinessTech ‘South Africa ranked among unsafe countries in the world – as citizens live in fear’ South Africa ranked among unsafe countries in the world – as citizens live in fear (businesstech.co.za) (accessed 3 September 2022)
South Africa also has robust consumer protection laws that recognise that apartheid and discriminatory laws of the past have burdened the nation with unacceptably high levels of poverty, illiteracy and other forms of social and economic inequality and that it is necessary to promote and protect the economic interests of consumers.

ii. ASFs Observation

There is a disturbing lack of information and apparent deliberate effort by the ASFs industries to not disclose information on the practices that occur in animal farming and their impact on animal health and welfare amongst other concerns. Coupled with that is the fact that government (DALRRD, DFFE, DTIC and other departments) have overlooked the concerns on animal welfare and wellbeing as they put together policies that promote intensive and mass production of ASFs across the spectrum. There is no publicly accessible database of infringements relating to the Animals Protection Act.

A further issue is the deliberate misleading of conditions of production through humane washing and relating to environmental harms through green-washing. This is done through product labeling, packaging, marketing and otherwise.

In the case of Charissa Kemp and 10 Others v Fair Cape Dairies (PTY) LTD, the Advertising Regulatory Board’s Advertising Appeals Committee ordered Fair Cape Dairies to remove some misleading statements regarding the status of dairy cows from an advertisement. The company had used the slogan #happy cows and described its dairy as humane, claims that were proved by the applicants in the matter as misleading in light of the treatment of dairy cows, their offspring and how the milk is acquired from the cows.

iii. Alternatives Potential

In parallel, there is a growing movement internationally against Alternatives, in what has been termed “Food Label Censorship” meaning “the prohibition of use of meaty terms on alternative protein products”. The Good Food Institute indicates that label censorship undermines the free market and that label censorship is unconstitutional (based on the USA Constitutional Right contained in the First Amendment which includes inter alia freedom of speech). The South African Constitution contains the Right to Freedom of Expression in section 16 as well as Freedom of Religion, Belief and Opinion in section 15 of our Bill of Rights. The provision against censorship of Alternatives in relation to Constitutional Rights has not yet been tested in the South Africa courts.

There has been substantial litigation on this issue in various jurisdictions including in the USA at various states. In October 2022, the US District Court for the Eastern District of Arkansas declared unconstitutional and permanently blocked enforcement of an Arkansas food label censorship law. The law sought to prohibit the use of terms like “sausage” and “burger” when accompanied by terms like “vegan” or “plant-based.” The court declared that the law limited commercial free speech rights. The case was brought by The Good Food Institute, Animal Legal Defense Fund, and The American Civil Liberties Union and the decision of the court mirrored similar decisions relating to similar laws in other states such as Louisiana. The court in Arkansas ruled that there was no “evidence of broad marketplace confusion around plant-based meat alternatives to bolster” the allegations of confusion and to support the food label censorship. In July 2022, the French Conseil d’Etat,
France’s highest court suspended a national decree banning the use of meat like terminology for plant-based products following a challenge to the decree.

In South Africa, the South African Consumer Goods Council, International challenged the Executive Officer of Agricultural Product Standards’ 22 June 2022 Communiqué similarly banning the use of meaty names on plant-based alternatives. They sought to interdict the Food Safety Agency from seizing plant-based products with the banned labels. In August 2022, the South Gauteng High Court sitting in Johannesburg granted a temporary interdict, stopping the Agency from implementing such seizures. Although the plant-based meat industry welcomed the interdict, they urged government to hold dialogue with industry players in order to develop a shared understanding around the issue, in particular on the need to develop specific regulations for plant-based Alternatives.\(^\text{106}\) The matter will be back in court in November 2022, where the interdict may either be confirmed or cancelled.

In the Working Paper Survey, three hundred and seventy-nine (73%) of the participants reached during the survey in the development of the Working Paper were of the view that Plant-based meats should be named or labelled differently from animal-based meats. The reasons why those participants felt they should be named differently included the thinking that they are not real meat (146: 28.1%); that it is confusing to consumers (147: 28.3%); that it is misleading to consumers (62: 11.9%); and other reasons (4: 0.8%) of wanting to inform the consumer and to differentiate them from other meats.

Overall, the dominating reason for wanting to name Plant-based meats differently is to inform and not mislead consumers. As for what consumers think Plant-based meats should be named, several diverse responses were provided but predominantly highlighting the need to reflect that they are Plant-based (e.g. names such as Plant-based meats, Plant-based foods, plant derived foods, plant meat, plant beef etc.); are vegetarian or vegan type foods (e.g. names such as vegetable burgers, vegetable patties, vegan meaty, vegetarian meat, vegan meat etc.); names that focused on the healthy aspects (e.g. healthier meat, healthy living meat, better living meat, green meat). Overall, the possible names suggested by participants indirectly reflected their perception on these Plant-based meats.

The request for proper labelling is a fair request considering that consumers need full information to inform their eating habits that are guided by various reasons ranging from health, religion, ethical and other reasons as discussed in earlier sections. Government has recognised this need through the prohibition of use of names meant for processed meat on meat analogues.\(^\text{107}\) Such requirements for transparency should, however, similarly extend to ASFs in order for consumers to make informed choices.

In ensuring the proper labelling and handling of meat analogues, the following issues should be equally considered:

1. The labelling requirements should be enabling and not prohibitory or make it too onerous for the Alternatives industry to comply with. This is important in ensuring the growth of this industry by removing unnecessary barriers; and


\(^{107}\) Issued by the DALRRD on 22 June 2022 and available at: https://www.foodfocus.co.za/assets/documents/Communique%20to%20the%20stakeholders%20of%20meat%20analogues%20-%2022%20June%202022.pdf (accessed 7 September 2022)
2. The regulatory regime should consider the existing industry practice and give the affected industry players time to transition and comply with the labelling, processing and handling regulations ahead of full compliance.

It should be pointed out that meat analogues, can in many instances, be highly processed which could have nutritional and health implications. While the positive benefits of Alternatives are often highlighted, they may also have negative environmental and health impacts and the regulatory framework should be cognisant of this.

The meat analogue labelling and regulatory framework can learn from milk labelling regulations in that they do provide for the labelling of Plant-based milk substitutes. This is a recognition of the increasing use of Plant-based milk substitutes in the diets of South Africans and helps in creating acceptance of the analogues amongst consumers and other players.

G. Key Identified Issue: External, Economic, International

i. Grounding

Currently mass production of animals under intensive factory farming is resulting in relatively cheaper ASFs relative to plant-based diets. The Working Paper identified cost as one of the major barriers to transition to plant-based diets.

Strategies that reduce the extent of intensive farming and increase extensive farming will facilitate an incremental step towards the sustainable transformation of South Africa’s food systems. This can be done by promoting Plant-based Alternatives through mechanisms such as subsidies, whilst ensuring that South Africa stops supporting and subsidising harmful industrial animal agriculture and unethical and unsustainable practices. The tax regime can similarly be used to achieve the same objectives. This includes carbon tax application to industrial animal agriculture, introduction of a Meat Tax and tax reduction/exemption for Alternatives.

In supporting Alternatives, South Africa must also be cognisant of the fact that this is the direction that the world is taking, and that countries embracing Alternatives are reaping and will continue to reap huge economic benefits. These include direct benefits through production, distribution and sale of Alternatives, employment creation as well as indirect benefits emanating from reduced health spending as citizens’ health improves due to better diets and nutrition, reduced incidents of zoonotic and non-communicable diseases and better environmental quality. Embracing and supporting Alternatives will also assist the country in meeting its international climate change obligations as detailed in the NDC.

ii. ASFs Observations

By continuing to promote industrial animal agriculture and by not fully embracing Alternatives, South Africa risks missing its climate change targets, thereby impacting its position as a responsible global citizen. Meeting these targets is crucial given South Africa’s position as a party to international agreements on addressing climate change. Key amongst these is the United Nations Framework Convention on Climate Change (UNFCCC) (1992), the Kyoto Protocol (1997) and the Paris Agreement of 2015, which seeks to enhance and strengthen the implementation of the UNFCCC.

The country may also miss considerable economic opportunities that Alternatives can bring through exports, which can facilitate international trade and facilitate South Africa’s economic performance and transformation.

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iii. Alternatives Potential

According to a study funded by the UK’s Foreign, Commonwealth & Development Office and the ClimateWorks Foundation, alternative proteins could support 9.8 million new jobs and bring $1.1 trillion to the global economy by 2050.109

According to the World Economic Forum June 2019 report110: “Around one-third of the global meat supply will be provided by new technologies in meat Alternatives within the next 10 years, and in 20 years, only 40% of global meat consumption will come from conventional meat sources.”

“Cultured meat will outgrow novel meat replacements sometime between 2025 and 2040 as both technology and consumer preferences develop. In fact, the disruptive effect of new biotechnology methods will go beyond meat into milk, egg white, gelatine and fish products.”

Such changes will be driven by the fact that (among others):

1. New Alternatives can be created more efficiently than conventional meat using fewer natural resources and in a sustainable manner.
2. Solutions for increasing the efficiency of traditional meat production are almost exhausted with animal agriculture already having put massive pressure on land, the soils and water and with the ever-intensifying effects of climate change.
3. Meat Alternatives present fewer product risks than conventional meat to animal and human health and to the environment.

The Alternatives industry offers immense opportunities for job creation and economic growth. This is recognised by economists and industry alike who widely agree that Alternatives are the future.

Economists and executives see alternative proteins as the food of the future. Even the animal production industry is investing in Alternatives.

South Africa seem to be lagging behind in both development and uptake of meat Alternatives due to factors already discussed in sections above under barriers to transitioning. For South Africa to align to the WEF forecast, and witness both an increase in both production and consumption of meat Alternatives a number of interventions needs to be pursued to have a shift driven by the consumers, industry and government bodies.

To achieve social justice and ensure food security, a just transition towards alternative, healthy, sources of protein, particularly for poor, vulnerable and marginalised people, must be pursued. Excessive consumption of animal products is not conducive to human health or wellbeing in the long term, justifying a transition away from animal products towards more sustainable Alternatives.

According to the Good Food Institute, “Investing in improving the quality, affordability, and accessibility of alternative proteins should be a top priority for policymakers.”111

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110 https://www.weforum.org/agenda/2019/06/you-will-be-eating-replacement-meats-within-20-years-heres-why/
Sustainable Development Goals

Alternatives should be considered as a means to achieving almost all the United Nations Sustainable Development Goals (UN SDG) goals, especially the goals on zero hunger and no poverty, good health and wellbeing, decent work and economic growth, reduced inequality, responsible consumption and production, climate action, life below water, life on land and gender equality. This can only be achieved if Alternatives come at a cheaper price and are accessible to all people in society. In line with just transition principles, it is important to recognise that transforming South Africa’s food system can have negative unintended impacts, especially on the poor, vulnerable and marginalised. This can aggravate existing challenges, inequalities and unsustainability or create new ones, and in the process hampering the transition itself. The transition must therefore be inclusive, leave no one behind and address the question of “who bears the cost, and who enjoys the benefits of the transition” so as to fully address the attendant social justice issues.

3. CONCLUSION

The race is clearly already underway to determine which countries will become leaders in the production of alternative foods including meat and other foods traditionally sourced from animals. As with the energy industry, nations are called upon to take steps to prevent further harm, protect their citizens and residents and play their part in the global movement.

South Africa has an obligation not only to its own people, but to the international community to which it has made commitments, to explore the potential for Alternatives and dedicate resources to this.

The South African Government must recognise the vast opportunities to develop the Alternatives industry and properly regulate it in the early stages so that it may reap the benefits of being an early adopter.

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112 Theresa Tribaldos and Teea Kortetmäki, ‘Just transition principles and criteria for food systems and beyond’ available at: https://www.sciencedirect.com/science/article/pii/S2210422422000399 (last accessed 7 October 2022)
113 Ibid.
1. BARRIERS TO TRANSFORMING THE SOUTH AFRICAN FOOD SYSTEM

While there are many potential benefits to a transition away from ASFs towards Alternatives, the Working Paper identified a number of barriers to the adoption of alternative sources of protein in South Africa. The Barriers to transitioning from animal sourced foods to plants and other meat Alternatives are set out in the section below.

These barriers span across Social, Economic, Political, Environmental, Technological and Legal. The Project has focused mainly on the Legal and Policy barriers, and what can be done to transform with a particular focus on Government as a key stakeholder. It is essential that Government policies and legislation assist with transformation as many of the barriers can be addressed through regulation, as will be further detailed in the next Section.

- BARRIER 1: Governmental and Regulatory Failures**
- BARRIER 2: Industry: Vested and Entrenched Interests, Powerful, Lack of Accountability, Strong Lobbying, Advertising, Capture, Vested Interests
- BARRIER 3: Economic and Cost Factors
- BARRIER 4: Lack of Information and Research
- BARRIER 5: Awareness / knowledge and Perceptions
- BARRIER 6: Accessibility, Availability and Conveniency
- BARRIER 7: Cultural, Religious and Social Considerations
- BARRIER 8: Market and Supply Chain Issues
- BARRIER 9: Taste, Texture and Other Sensory Matters

BARRIER 1: Governmental and Regulatory Failures [Political, Legal, Social]

A. South African government currently heavily supports and promotes animal agriculture as evidenced by the Master Plans for poultry and other livestock species, the “Game Meat Strategy”, “Aquaculture Development Bill and “Guidelines for the Transportation of Animals by Sea”.

B. Law does not adequately factor in issues relating to animal agriculture, and there is a lack of proper regulation and enforcement.

C. Current regulatory framework is prohibitory in relation to the production, distribution and consumption of Alternatives.

D. Due to failure to regulate and set specific standards, including for animal welfare, there is a proliferation of soft-law and industry driven standards which are wholly inadequate, voluntary and unenforceable.
E. Policies development and implementation takes place in silos, with few tangible mechanisms for addressing the interconnected and systemic issues affecting the country’s food system.  

F. Regulatory framework fails to address animal interests and wellbeing as well as environmental protection. The focus is on the right to food and economic benefits without addressing the attendant negative impacts on animals and the environment.  

G. Law is not properly enforced across the spectrum – for example – animal welfare and cruelty related matters are enforced by NGO with no government funding.  

**BARRIER 2: Industry: Vested and Entrenched Interests, Powerful, Lack of Accountability, Strong Lobbying, Advertising, Capture, Vested Interests [Political, Legal, Social, Economic]**

A. “Agricultural Exceptionalism” including exceptions and exemptions to allow for the promotion of animal agriculture as well as failure to promulgate standards, among other examples.  

B. Powerful and well-organised meat and ASF industry groups and associations who engage directly with government and without involvement of NGOs representing other interests.  

C. Involvement in development of national standards and industry regulation / soft laws.  

D. Efforts of the meat/animal farming industry groups to dissuade government and consumers from adopting Alternatives.  

E. Green Washing and humane-washing of ASFs including on labelling and in advertisements – including use of terms such as “Happy Cows”; “Humane”; “Friendly to animals” and claims of environmentally friendly and social initiatives among others.  

F. Negative statements around Alternatives.  

G. Strong public advertising and campaigns promoting the consumption of ASFs– such as linking “National Braai Day” to Heritage Day in the country.  

**BARRIER 3: Economic and Cost Factors [Economic, Legal]**

A. Cost of Alternatives compared to ASFs is high and therefore not accessible to vast majority of the population. ASFs are cheap or much cheaper particularly fast-food outlets. Some of the reasons for this is because:  

   a. the costs of ASFs do not reflect the true costs as they fail to take into account externalities.  
   b. Government provides financial incentives to animal agricultural industry and subsidises ASFs and make them cheaper.  

B. Current costs of developing Alternatives and bringing them to the scale needed is a major barrier.  

**BARRIER 4: Lack of Information and Research [Technological, Social, Environmental, Economic]**

A. Insufficient information and research on Alternatives in the South African Context.  

B. Lack of research and data on important information relating to current ASF paradigm.  

C. Research, where it does exist can be funded by industry or linked to industry therefore representing specific viewpoints.  

D. Government relies on certain research when producing policy and legislative documents.  

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BARRIER 5: Awareness / Knowledge and Perceptions [Social, Legal and Political]

Around ASFs and Alternatives

ASFs
A. Lack of awareness regarding the various harms associated with production of ASFs including impacts on animal welfare, environment, health, food safety and other rights.
B. Lack of transparency around practices relating to ASFs and active misleading of consumers through practices such as “greenwashing” and “humane washing”.
C. False ideas around animal agricultural practices, sources of food, nutrition of ASFs.

Alternatives
A. Perceptions and misconceptions around Alternatives [health, taste, nutrition].
B. Lack of awareness of how to use or cook with Alternatives.
C. Perceptions / uncertainty / lack of knowledge of products (including how they are made; their contents; how to prepare and cook them).
D. Perceptions on health benefits and implications: including in relation to “naturalness”.
E. Perceptions on veganism and vegetarianism and race and class associations.

BARRIER 6: Accessibility, Availability and Convenience [Social, Economic, Environmental]

A. Non-availability of “Alternatives” including throughout the supply chain including in fast-food outlets, certain retailers and other consumer purchase points.
B. Regional non-availability.
C. Accessibility and availability: lack of availability and accessibility across different areas including the ability to purchase in different settings (this also includes access to the market for new entrants).
D. The Working Paper Survey and KIIs results showed that there is general availability of Alternatives in South Africa’s food stores, although they are allocated small spaces’.

BARRIER 7: Cultural, Religious and Social Considerations and Perceptions [Social, Environmental]

A. Heavy emphasis on meat and ASFs in South Africa around consumption and identity associated with ASFs, identification of animal production and consumption as a symbol of heritage and wealth, and entrenchment in lives, habits and livelihoods.
B. The Working Paper Survey showed that there are different perceptions regarding the consumption of both ASFs and Alternatives. It emerged that there is currently significant stigma that is attached to Alternatives (given their association with veganism), leading to the view that they are expensive and specifically in the context of South Africa that they are for white people.
C. In some African cultural mind-sets, beef is for example considered better than beans because it is more expensive than the latter. As such, to have meat on one’s plate is a sign of prosperity.
D. The Working Paper Survey showed that some people believe that meat consumption is integral to a good and healthy diet. Yet, the opposite may be true in light of World Health Organisation (WHO)’s reports on the carcinogenic probability of red and processed meat and the fact that there are other communicable and non-communicable diseases that are associated with the consumption of animal-based protein.
BARRIER 8: Market and Supply Chain Issues [Economic, Legal, Environmental]

A. The number of suppliers and products of Alternatives in South Africa is currently larger relative to other countries on the African continent presenting an opportunity to transition the food system. However, there is potential and a definite need to grow this number as well as spread the distribution to go beyond the elite category of the South African population. Non-meat Alternatives need to be readily and cheaply available to address issues of household food security in a population that has the highest inequality and considerable food insecurity amongst the general population.

B. There is currently no proper regulation around Alternatives.

C. Alternatives have small spaces on store shelves and are not easily accessible in many restaurants, particularly in certain areas.

BARRIER 9: Taste, Texture and Other Sensory [Social, Technological]

A. Taste, Texture, Flavour: Alternatives having bad taste / not the same or as pleasurable taste, flavour and texture

B. Perceptions around the taste, texture and flavour of alternatives
SECTION 2:
SOWING THE SEEDS
PART I

1. INTRODUCTION

Based on the aforementioned Section, specifically the “Identified Focus Issues” and “Barriers” with the current system, this Section II lays the framework for a transformed food system.

Part I sets basic Pillars specifically key governance principles, Overarching approach and Strategic Priorities.

Part II then identifies 15 specific Recommended Strategic Interventions and more specific sub-interventions.

Part III briefly looks ahead to a way forward.

2. PILLARS FOR BUILDING A JUST AND INCLUSIVE FOOD SYSTEM

Based on the research undertaken and specifically, issues identified within the current food system and barriers identified, 7 (seven) key Pillars for a just food system in South Africa emerged:

- **PILLAR 1:** The Food System Must Protect Human Rights and Advance Social Justice
- **PILLAR 2:** The Food System Must Protect the Environment
- **PILLAR 3:** The Food System Must Protect Animal Interests
- **PILLAR 4:** The Food System Must Promote Nutrition, Human and Animal Health and Food SAFETY
- **PILLAR 5:** There Must Be Accountability and Transparency
- **PILLAR 6:** The Food System must be Financially and Internationally Responsible
- **PILLAR 7:** The Food System Must Be Properly and Fairly Governed and Regulated**

Given the emphasis in this Project and White Paper on law and policy, Pillar 7 has been expanded on further for purposes of this section, specifically with reference to a clear Governance Mandate and Governance Principles.

Furthermore, Pillar 7 also serves as an important tool through which to implement the other Pillars.
7 PILLARS OF A MORE JUST & INCLUSIVE FOOD SYSTEM IN SOUTH AFRICA

PILLAR 1
THE FOOD SYSTEM MUST PROTECT HUMAN RIGHTS & ADVANCE SOCIAL JUSTICE

PILLAR 2
THE FOOD SYSTEM MUST PROTECT THE ENVIRONMENT

PILLAR 3
THE FOOD SYSTEM MUST PROTECT ANIMAL INTERESTS

PILLAR 4
THE FOOD SYSTEM MUST PROMOTE NUTRITION, HUMAN & ANIMAL HEALTH & FOOD SAFETY

PILLAR 5
THERE MUST BE ACCOUNTABILITY AND TRANSPARENCY

PILLAR 6
THE FOOD SYSTEM MUST BE FINANCIALLY AND INTERNATIONALLY RESPONSIBLE

PILLAR 7
THE FOOD SYSTEM MUST BE PROPERLY AND FAIRLY GOVERNED AND REGULATED**
3. EXPANSION: PILLAR 7: THE FOOD SYSTEM MUST BE PROPERLY AND FAIRLY GOVERNED AND REGULATED

South Africa’s food governance approach must be multi-faceted, informed by the realisation that transforming the country’s food system must be integrated and address holistic circumstances including environmental, economic and social concerns with a view to protecting human and non-human animals as well as the environment. Whilst the governance mandate may be located within a specified administrative function, there must be cross-sectoral and cross-spherical collaboration in the spirit of the country’s cooperative governance approach to ensure a holistic and integrated approach.

The Working Paper “Barriers to the Transformation of South Africa’s Food System: Can the Law be a Lever for Change?” recognised that South Africa’s constitutional and legal framework has numerous provisions that can and must be utilised to transform South Africa’s food system with a focus on protecting animal interests, human and animal health and other rights and the country’s environmental protection imperatives. The legal system is however very wide and is distributed across different sectors, often making it difficult for the end users to fully understand or even have knowledge of its existence.

To address these challenges, an integrated and coordinated approach is required and must attend to the following:

(i) Harmonisation of policies and legislation;

(ii) Cooperation and collaboration between and amongst different government departments, and between and amongst the different spheres of government at national, provincial and municipal levels;

(iii) Decision-making by government must be consultative and participatory and take into consideration the needs of the different interest groups affected by the decisions. This includes the interests of human and non-human animals and the consideration of the different social, economic, cultural, religious, political and other imperatives. Participation of the vulnerable, marginalised and structurally excluded must be a priority and should be actively pursued;

(iv) To ensure effective participation and inclusion, government must ensure that there is adequate education and awareness raising amongst citizens and residents about the country’s current food system and proposals for its transformation. Information shared must be backed by research and evidence identifying the flaws in the current system and the advantages and disadvantages in the proposals put forward to aid the transformation. The evidence and research must take into account different categories of knowledge, including traditional/customary knowledge systems and how they have been used throughout generations to sustain food systems; and

(v) Equally important is research into the impact of intensive animal farming on animal wellbeing and welfare, human health, social justice, the environment and climate change in order to inform law and policy reform. The health benefits and appropriate production methods of Alternatives are also important research areas to help understanding these and appropriately regulating them; in creating acceptance of such products among the public; and ensuring that the same problems that are currently associated with intensive animal farming are not transplanted into the alternative food sources production and distribution sectors.
The governance approach to ensure the transformation of South Africa’s food system will be informed by the following principles:

(i) Constitutional values of Dignity, Equality and Freedom;
(ii) Inclusion, consultative and participatory, using a bottom-up approach;
(iii) Creation of a better policy, legal and regulatory framework and its full and effective implementation;
(iv) Institutional coherence, collaboration and engagement, both horizontally and vertically;
(v) Evidence-based decision making, informed by rigorous and inclusive research approaches;
(vi) Recognition of the intrinsic worth of humans, non-human animals and Nature;
(vii) Accountability and Transparency of Government and Industry;
(viii) Avoiding Conflicts of Interest;
(ix) Good governance and fairness in regulation;
(x) Empowering and informing consumers and other stakeholders through education and awareness raising;
(xi) Public Participation; and
(xii) Engagement with all relevant stakeholders.

4. OVERARCHING APPROACH

The development and transformation of South Africa’s food system should be informed by the realisation that the country is highly constrained by multiple challenges/realities including but not limited to high levels of unemployment, poverty and inequality, a legacy of apartheid. The food transformation process must therefore recognise the needs and fulfil the rights of vulnerable groups and previously disadvantaged communities, and in particular ensure their full, inclusive and transparent participation as producers, distributors and consumers of food. This calls for the creation and implementation of a regulatory framework that understands the status quo and seeks to transform it for the betterment of the lives of all who live in South Africa, both human and non-human animals.

5. AVENUES

Government and the relevant departments must take swift and affirmative actions to transform the food industry through two distinctive and interrelated “Avenues” being:

A. **Avenue 1:** A phased shift away from Animal Sourced Foods (ASFs) and systems relating to animal agriculture, specifically intensive and industrialised animal agriculture through:
   a. Reduction in intensive animal agriculture and reliance on animal sourced foods;
   b. Supporting well-regulated, less intensive animal production,
with an ultimate goal to completely eliminate intensive and industrialised farming of animals.
B. **Avenue 2:** A phased shift towards Alternatives through supporting and facilitating increased production and accessibility of Alternatives.

6. **PRACTICALITIES**

Given the current regulatory framework including Constitutional mandates, actions will need to be taken at various governmental levels including national, provincial, and local. Furthermore, various government departments will need to co-ordinate for an integrated approach.

Practically, such transitions would require a phased approach with short-, medium- and long-term initiatives. However, given the impending and converging socio-economic crises, actions must be undertaken with an overarching sense of urgency.

7. **STRATEGIC PRIORITIES**

Due to various potential areas where action needs to occur, 5 (five) Strategic Priorities were identified based on analysis of abovementioned issues including the Key Identified Issues; Barriers and Pillars.

As previously iterated, given the emphasis in this Project and White Paper on law and policy, the Regulatory Strategic Pillar has formed the majority of Recommended Interventions proposed in the next section. Furthermore, for the Recommended Interventions relating directly to the abovementioned Strategic Priorities, Regulation has been the focal point to achieve these.

**A. Regulation: Governance, Law & Policy**

Creation and implementation of a clear and effective policy and legislative framework that is capable of achieving the Pillars of protecting and promoting the interests of humans and animals and the environment and holding stakeholders accountable through proper governance. This includes through incentivising good practices and
penalising harmful practices. It also ensures government is creating and facilitating a regulatory environment to achieve the Pillars.

B. Research and Development

Promoting and supporting in all relevant areas and identifying where research gaps exist. Furthermore, it includes aligning law and policy to relevant information, science and data and ensuring that regulation keeps abreast of relevant developments and is amended accordingly.

C. Investment, Funding and Financial

Providing financial support and resources including for research as well as incentivising positive activities and penalising harmful activities. Ensuring relevant costs are accounted for and borne by the correct stakeholder.

D. Transparency and Accountability

Ensuring stakeholders are held accountable and that regulation is enforced. Creation and promotion of a resilient, inclusive and transformative food system that is based on good cooperative governance, international collaboration and citizen engagement. Ensuring access to information and procedural and substantive justice and remedies for rights and violations of law relating to human, nonhuman human animals and the environment through the use of administrative justice and court systems.

E. Education and Awareness

Creating informed consumers and public by providing relevant and up to date information and education on food systems issues.
PART II

1. RECOMMENDED INTERVENTIONS FOR ACHIEVING A TRANSFORMED FOOD SYSTEM

For purposes of this part, 15 (fifteen) Recommended Interventions have been identified. More specific sub-interventions are included under each main Recommended Intervention. For comparison purposes, a “Precedent” jurisdiction has been included in most cases. These generally represent specific regulatory actions which have been taken by government in other jurisdictions globally, although some represent actions and programs initiated by NGOs and even industry. These are intended for example purposes only and it is noted that interventions from other countries and jurisdictions may not be relevant to and/or feasible in the South African context for a variety of reasons and this must be considered.

All recommendations raise unique complexities and warrant further research and analysis. Some recommendations in fulfilling one Pillar, have the potential to prejudice or compromise another, and accordingly will require an examination and potential weighting.

The proposals are non-exhaustive but attempt to illustrate a high-level framework and practical examples of where South Africa’s food system may be transformed.

The focus is on regulation and more specifically on Government, Therefore, it does not focus on industry initiatives. Many recommendations, including for example, specific market-based interventions have not been included and are relevant and important to the discussion. Similarly, there are a number of interventions that can be undertaken at the industry level.
# 2. RECOMMENDED INTERVENTIONS SUMMARY TABLE

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<td>▪ Moratorium on any further Withdrawal of existing draft Policies and Legislation which Explicitly Promote the Expansion of Animal Agriculture and Intensification of Animals</td>
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<td>▪ Moratorium on Licensing of New and Expanded Facilities in Terms of Relevant Laws</td>
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<tr>
<td>▪ Fund Research: Public and Government Funding</td>
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<td>▪ Fund Research: University and Academic Institution Funding (Public and/or Private)</td>
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<tr>
<td>▪ Establish a Dedicated Government Fund for Alternatives</td>
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<th>2: HOLISTIC, INTEGRATED AND FAIR REGULATION, GOVERNMENTAL CO-ORDINATION AND ENGAGEMENT</th>
<th>9: SUBSIDIES AND FINANCIAL INCENTIVES</th>
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<tr>
<td>▪ Develop Single Overarching Food Framework Policy and Legislation</td>
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<td>▪ Establishment of Intergovernmental Body Relating to Food Systems – Co-Operative Governance and Agreements</td>
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<td>▪ Mandate: Attend to Problematic Mandates and Conflicts of Interest</td>
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<td>▪ Initiate External Stakeholder Discussions</td>
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<td>▪ Explore and Initiate Finance, Subsidies and Economic Incentives or Alternatives</td>
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<td>▪ Incentivise producers, suppliers and stakeholders for good animal welfare, environmental and other relevant practices</td>
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<td>▪ Investigate and Analysis of Existing Subsidies and Payments to Animal Agricultural Industry</td>
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<td>▪ Empower Farmers: New Farmers and Existing Farmers through Exploring and Funding Transitional Programs</td>
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<tr>
<th>3: ALTERNATIVES POLICY, STRATEGY AND LEGISLATION</th>
<th>10: GOVERNMENT POLICIES, PROCUREMENT AND PROGRAMS</th>
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<tr>
<td>▪ Develop a Strategy and Vision for Alternatives (including protein and other products)</td>
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<td>▪ Specific Regulation for each of Plant-based and Cellular-based Alternatives, with scope for other Alternatives in future</td>
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<td>▪ Government Procurement</td>
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<td>▪ Government Policies</td>
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<td>▪ Specific Welfare Standards for Animals in Agriculture including</td>
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<td>▪ Other Animal Law Reforms</td>
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<td>▪ Enforcement of Existing Laws by Animal Agriculture – Both Formal and Informal Market</td>
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<td>▪ Ensuring Research, Data and Information relating to Realities and Harms of Animal Production as well as Incorporating Alternatives into Agricultural Law and Policy</td>
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<td>▪ Ensuring Research, Data and Information relating to Realities and Harms of Animal Production as well as Incorporating Alternatives into Human Health Standards and Regulation</td>
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<td>▪ Ensuring Research, Data and Information relating to Realities and Harms of Animal Production as well as Incorporating Alternatives into Constitutional and Social Law and Policy</td>
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<tr>
<td>▪ Penalise products from intensive systems of production</td>
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<th>6: RESEARCH</th>
<th>13: LABELLING, MARKETING AND ADVERTISING</th>
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<tr>
<td>▪ Initiate Programs at Universities and Academic Institutions including Youth Empowerment and Development relating to Alternatives</td>
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<td>▪ Develop robust and comprehensive list of missing information in South African Context and Develop a Research Roadmap and Agenda</td>
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<td>▪ Labeling Requirements: Animal welfare and wellbeing standards and regulation</td>
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<tr>
<td>▪ Labeling Requirements: Climate and Health as Examples Animal welfare and wellbeing standards and regulation</td>
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<td>▪ Restrictions on Labeling, Marketing and Advertising</td>
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<th>RECOMMENDED INTERVENTION 14: EDUCATION INITIATIVES AND AWARENESS</th>
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<tr>
<td>▪ Develop skills and knowledge relating to Alternatives</td>
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<td>▪ Review and Update Nutritional Guidelines / Food Pyramids</td>
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<td>▪ Early education and Awareness</td>
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<th>8: ENDORSEMENT AND SUPPORT</th>
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<tr>
<td>▪ Plant-based Treaty</td>
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<td>▪ Animal Initiatives</td>
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<td>▪ Nature Initiatives</td>
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3. FURTHER BREAKDOWN OF RECOMMENDED INTERVENTIONS

RECOMMENDED INTERVENTION 1: REGULATORY MORATORIUM

A. Moratorium on any further and Withdrawal of Existing Policies and Legislation which Explicitly Promote the Expansion of Animal Agriculture and Intensification of Animals

Policies and legislation (and any current drafts of such documents) which promote the expansion of animal agriculture and intensification of animals must, as a matter of urgency be placed on hold. This includes withdrawing existing drafts and placing a moratorium on any further laws and policies.

At a minimum, this moratorium must remain in place such time as sufficient information and data is obtained around the various potential harms of the practices advocated for in such laws and policies and other critical information relating thereto.

Such policies include but are not limited to:

1. Poultry Master Plan;
2. Other animal master plans;
3. Agro Processing Value Chain (insofar as it relates to animal agriculture);
4. Aquaculture Development Bill;
5. Guidelines for transportation of Animals; and

Any new legislation and policy must be rigorously tested against South Africa’s current regulatory regime and obligations, particular its climate change obligations.

B. Moratorium on Licensing of New and Expanded Facilities in Terms of Relevant Laws

A moratorium must be placed on the development of any additional large scale animal agricultural operations through the use of restriction of licensing and permitting for such operations. This can be done in terms of environmental legislation (for example NEMA: National Environmental Management Act: Listing Notice 1 of activities and competent authorities identified in terms of sections 24(2) and 24D115) as well as in terms of any health and safety requirements.

This recommendation must be properly assessed given potential disruptions to food supply and other socio-economic impacts; however, the recommendation requires the relevant governmental entities to critically engage with the current legislation to understand existing harms and ensure compliance.

Precedent: USA (Federal): The Farm System Reform Act (bill), places a moratorium on large, concentrated animal feeding operations; requires country-of-origin labeling for beef, pork, and dairy products; and otherwise revises provisions related to the marketing of livestock, poultry, and meat.116

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Precedent: USA (California): AB-2764 Animals: commercial animal feeding operations: prohibition on new operations: This bill would prohibit commercial animal feeding operations as defined, from commencing or expanding operations.  

RECOMMENDED INTERVENTION 2: HOLISTIC, INTEGRATED AND FAIR REGULATION AND GOVERNMENTAL CO-ORDINATION AND ENGAGEMENT

A. Develop Single Overarching Food Framework Policy and Legislation

South Africa would benefit from an overarching and integrated policy and piece of legislation regulating the food system and considering it as a system and not distinctive parts managed and operated by different departments and at different levels.

There are many different food system policies which require coherence analysis. Recently, researchers have recently identified the following set of issues and policies as an example: Agriculture: Agricultural Policy Action Plan 2015–2019; National Food and Nutrition Security Plan; Environment: National Environmental Management Act; Economic development: National Development Plan Health Roadmap for Nutrition in South Africa 2013–2017; Education: National School Nutrition Programme; Land reform; Rural development: Comprehensive Rural Development Program (CRDP); Social protection: Social Assistance Act and Overarching National Development Plan.

The National Environmental Management Act is an example of a framework legislation as it pertains to regulation of the environment, and which contains certain “SEMAs” or Specific Environmental Management Acts.

Any overarching law and policy must take cognisance of issues within current system, must factor in the most up to date science and research including from initiatives such as the EAT-Lancet Commission and other recommendations and considerations raised by this Project.

B. Establishment of Intergovernmental Body Relating to Food Systems – Co-Operative Governance and Agreements

An inter-governmental body must be established specifically, bearing in mind that food systems implicate various constitutional rights and impacts several areas of competencies.

For example, in accordance with Schedule 4 of the Constitution, the following are listed as Functional areas of concurrent national and provincial legislative competence: Agriculture; Animal control and diseases; Consumer protection; Cultural matters; Education at all levels, excluding tertiary education; Environment; Health services; Nature conservation, excluding national parks, national botanical gardens and marine resources; Pollution control; Regional planning and development; Soil conservation; Trade; Urban and rural development; Welfare services.

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117 https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB2764
120 https://eatforum.org/lancet-commission/policymakers/
Chapter 3 of the Constitution, sections 40 and 41 deals with Co-operative Governance. Establishing an inter-governmental body with involvement from all relevant departments at a national, provincial and local level will provide a platform for compliance with constitutional requirements. This is particularly pertinent for new and emerging industries such as Cellular-based Alternatives.

**Precedent: USA (Federal):** For example, in the USA, two governmental entities being the U.S. Food and Drug Administration (FDA) and the USDA (United States Department of Agriculture) entered into a “Formal Agreement Between FDA and USDA Regarding Oversight of Human Food Produced Using Animal Cell Technology Derived from Cell Lines of USDA-amenable Species”.

The FDA and the USDA Food Safety and Inspection Service (FSIS) launched a joint webinar to give interested stakeholders an overview of FDA’s and USDA’s roles and responsibilities for cultured animal cell human and animal food products. The webinar provided information on FDA and USDA’s respective statutory authorities, roles and responsibilities for cultured animal cell food products, and regulatory points of contact for new food production technology. They have also held a joint public meeting to discuss the potential hazards, oversight considerations, and labelling of cell cultured food products derived from livestock and poultry tissue.

C. **Mandate: Attend to Problematic Mandates and Conflicts of Interest**

In relation to animal interests and protection, separating animal use and promotion from animal welfare and wellbeing regulatory issues is essential. The current regime creates challenges and conflicts of interest when the same department that promotes the economic exploitation of animals also seeks to regulate their welfare. Certain aspects of animal protection should be tasked to different departments in an integrated manner. For example, the Department of Justice and Correctional Services (DOJCS) should be tasked with the enforcement of the Animals Protection Act and the proposed Animal Welfare Act. The Department of Justice was originally tasked with the enforcement of the APA prior to 1997 and as a criminal statute, it is useful to have it fall under the DOJCS. There are aspects of animal welfare and well-being which must be tasked to the DFFE given its wildlife mandate and well-being mandate in terms of the National Environmental Management Laws Amendment Act, 2 of 2022. Other departments such as the Department of Social Development (DSD) should be tasked with issues relating to protecting vulnerable populations, NGOs and links between violence and cruelty relating to humans and animals. These are initial proposals which warrant further exploration.

In the context of transforming the country’s food system, this separation will also seek to remove the emphasis on animal and animal products production and consumption from the centre of the country’s food system, and instead place emphasis on the development, production and consumption of Alternatives.

A regulatory and institutional framework supporting this shift, and its implementation should be at the centre of this transformation.

Given the mandate of the DTIC, it should initiate and develop Alternatives in South Africa - including Plant-based Alternatives and Cellular-based Alternatives. Currently, the DTIC has for example, the Master Poultry Plan but does not simultaneously seek to promote the Alternatives industry. Nor is there sufficient safeguards in place to ensure oligopolies and monopolies emerge. There are competition and other issues with powerful vertically integrated

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122 https://www.youtube.com/watch?v=j4DCAx0EhYM

companies such as those that currently exist within South African animal agricultural industry which should be investigated and interrogated.

Coordination between and amongst the different role players is key. A prerequisite is the need for a central coordinating institution that then marshals the rest of the government departments at national, provincial and local level in a holistic, coordinated and cooperative approach.

D. Develop Dedicated Governmental Bodies: Animal Protection and Alternatives

The South African Government should establish two separate, specialised and dedicated governmental bodies tasked with research, development, regulation and other issues relating to respectively:

1. Animal Protection and law; and
2. Alternatives.

This should include stakeholders from relevant governmental departments across national, provincial and local levels. Such body/ies should then engage with relevant stakeholders in terms of Recommended Intervention E. below through a dedicated Forum.

Precedent: Animals: Research and work is being done around the globe relating to the establishment of Independent Office of Animal Protection.124

Precedent: Alternatives: Singapore: Singapore has a dedicated food and security body, known as the Singapore Food Agency. On 26 July 2018, the agency was announced as a consolidation of all food related government responsibilities in Singapore which were carried out by the Agri-Food and Veterinary Authority of Singapore (AVA), the National Environment Agency (NEA), and the Health Sciences Authority of Singapore (HSA).125

E. Initiate External Stakeholder Discussions

The aforementioned Governmental bodies (or until such time as same is developed, a consortium of the relevant Government departments and representatives) must engage with:

1. the animal protection sector; and
2. the Alternatives Industry

respectively, in a co-ordinated manner.

The designated Government Entities must establish and work with the abovementioned industries and sectors through a dedicated body and liaise around policy, law, developments and other challenges and needs of the sector / industry and relevant stakeholders to ensure communication.

Precedent: South Africa: The Wildlife Welfare Forum currently being established between DFFE and the animal protection sector.

Precedent: South Africa: The DFFE has established and worked with the wildlife industry in terms of a “Wildlife Forum” since the 1990s.

125 https://www.sfa.gov.sg/about-sfa/who-we-are
A. Develop a Strategy and Vision for Alternatives (including protein and other products)

Similar to the Poultry Master Plan and Draft Game Meat Strategy, the government should initiate processes for policies and programs that explore the possibilities relating to Alternatives including in order to stimulate local production, ensure accessibility, proper regulation and globally competitive prices. These include Plant-based Alternatives and Cell-based Alternatives but should also include other potential products in the South African context which could be viable. For example, potential commodities include mushrooms that are currently considered a niche market in the country and indigenous vegetables such as amaranth, okra, Bambara nuts that are considered underutilised according to the DALRRD agriculture and agro-processing masterplan. South Africa should consider utilising indigenous seeds as well and incorporating communities and indigenous knowledge systems particular in relation to Plant-based Alternatives and their supply.

South Africa has an opportunity to be a leader on the African continent and drive this industry specifically for Alternatives which present major opportunities for economic growth, the creation of jobs, the development of innovative technology and empowerment, if correctly done.

Precendent: Denmark: In terms of the climate agreement for food and agriculture, the Danish government will devise a strategy for “green proteins” for animals and humans, backed by 260 million Danish kroner (€35 million) over five years. According to GFI, this funding is likely to support fermentation-made proteins and cultivated meat (grown from cells), as well as animal feed. All major parties in the Parliament have signed on to an accord that recognises plant-based foods as a “central element in the green transition,” and that pledges the government to developing a national action plan for plant-based food with quantifiable goals.

Precendent: European Union: The EU has developed the “Farm to Fork Strategy” which plans to encourage a shift towards Plant-based, and a more sustainable diet.

B. Specific Regulation for each of Plant-based and Cellular-based Alternatives, with scope for other Alternatives in future

Existing Processed Meat Regulations do not apply to Alternatives including meat analogues. There is no piece of legislation regulating meat analogues specifically. While there are aspects which are regulated under existing laws, and existing laws which can be applied to them, the lack of a definitive regulatory scheme constitutes a major gap. It is also concerning as many of these products are on the market and some have been on the market for decades (particularly Plant-based Alternatives). There should be specific regulations in respect of these foods in order to create certainty, accountability, trust and good governance. The Executive Officer of Agricultural Product Standards’ 22 June 2022 communiqué illustrates how lack of regulation can lead to confusion and arbitrariness.

Accordingly, government must prioritise drafting legislation which applies to this sector which takes into account relevant factors. The Consumer Goods Council of South Africa has indicated that it has requested that DALRRD fast-tracks the formulation of appropriate legislation for meat analogue products. It has also indicated that 85% of

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126 https://www.dalrrd.gov.za › sideMenu › docs NATIONAL PLAN FOR CONSERVATON AND SUSTAINABLE ...
129 https://food.ec.europa.eu/horizontal-topics/farm-fork-strategy_en
the sector has agreed to establish the regulatory framework.\textsuperscript{130} For products which are already on market this must be done urgently – including Plant-based Alternatives and other meat analogues including those made from fungi.

There is need for the development of a clear regulatory framework including government and relevant departments working with the Alternatives industry to create regulations that pertain specifically to this sector to spearhead the growth of this food category.

This must occur as a matter of urgency for the existing meat analogues industry and should set out specific standards relating to among other issues the promotion of:

1. Food Safety and Health;
2. Environmental protection;
3. Consumer Protection including naming, packaging and labelling requirements;
4. Social Justice;
5. Animal Protection; and
6. Others.

\textbf{Precedent: European Union:} Examples of this being done can be found in the EU, where pre-market authorisations for foods made from animal cell or tissue culture, fermentation-enabled components, and certain plant-based meals are regulated under the Novel Foods Regulation (Regulation (EU) No 2015/2283) in the European Union (EU). As soon as EU officials give a novel food product their stamp of approval, the product is eligible for sale in all 27 EU nations, in addition to Iceland, Liechtenstein, Norway, and Switzerland.\textsuperscript{131}

\textbf{Precedent: Singapore:} In 2019, the Singapore Food Agency (SFA) launched the novel food regulatory framework, which mandates that businesses seek pre-market assessment for novel foods like alternative protein products that have no previous history of being consumed as food. This regulation applies to companies that manufacture, distribute, or sell novel foods.\textsuperscript{132} Companies are required to conduct and submit safety assessments of the protein in order to cover potential threats to food safety. These threats include toxicity, allergenicity, the safety of its production method, and dietary exposure resulting from consumption. In addition to this, they are required to disclose specific information on the ingredients used in their manufacturing processes as well as the controls put in place to ensure the quality of the food they produce.\textsuperscript{133}

In the year 2020, Singapore gave its approval to the selling of meat grown in cell culture. As of the 11th of October 2022, it is the first and only nation in the world to implement such a policy.\textsuperscript{134} On December 1, 2020, SFA approved Eat Just Inc.’s cultivated chicken bites—making it the most advanced regulatory regime for cultivated meat at present.\textsuperscript{135}

\textbf{United Kingdom:} The government of the United Kingdom has stated that it will continue to review the novel foods regulations in an effort to make them more “transparent and effective.”\textsuperscript{136} In a report titled “The Benefits of Brexit: How the UK is Taking Advantage of Leaving the EU”, the government states that it will no longer be essential to

\textsuperscript{130} \url{https://www.cgesa.co.za/statement-from-the-consumer-goods-council-of-south-africa-on-the-directive-to-seize-analogue-meat-products/}
\textsuperscript{131} \url{https://gfi-apac.org/novel-food-regulations-around-the-world/#:~:text=Singapore,for%20cultivated%20meat%20at%20present.}
\textsuperscript{132} \url{https://www.sfa.gov.sg/food-information/risk-at-a-glance/safety-of-alternative-protein}
\textsuperscript{133} \url{https://www.sfa.gov.sg/food-information/risk-at-a-glance/safety-of-alternative-protein}
\textsuperscript{134} \url{https://gfi-apac.org/novel-food-regulations-around-the-world/#:~:text=Singapore,for%20cultivated%20meat%20at%20present.}
\textsuperscript{135} \url{https://gfi-apac.org/novel-food-regulations-around-the-world/#:~:text=Singapore,for%20cultivated%20meat%20at%20present.}
\textsuperscript{136} The Benefits of Brexit: How the UK is taking advantage of leaving the EU (publishing.service.gov.uk)
follow the process that the EU uses for certifying innovative foods. Instead, the United Kingdom will implement a system that is intended to promote “innovation in the sustainable protein sector.” To promote safe innovation in the sustainable protein industry, the UK government will be working with the Food Standards Agency to improve the approval procedure for novel foods as part of an ongoing review of the country's new foods laws. This is in a bid to promote the alternative food industry.

Precedent: USA: An executive order was issued by the White House with the goal of “advancing biotechnology and biomanufacturing innovation for a sustainable, safe, and secure American bioeconomy.” This was the first significant step taken by the government to hasten the development of viable alternatives to conventional protein sources. The directive mandates that agency heads compile studies on the biotechnology industry in the United States, such as the USDA's report on "cultivating alternative food sources". Says a senior administration official.

Precedent: Japan: In 2020, the Japanese Ministry of Agriculture, Forestry, and Fisheries established a public-private partnership to develop regulations for plant-based foods derived through innovative technologies, with the goal of encouraging the use of non-traditional protein sources in the Japanese diet. To encourage development of the plant-based industry, the Japanese government introduced new labelling regulations in 2021. There has been significant development in the plant-based business in Japan over the past few years, especially in regard to restaurants attempting novel menu items and larger traditional meat product manufacturers. The new labelling document looks to be industry-friendly, permitting the use of phrases like “soy-based meat” or “oat milk” in plant-based labelling as long as the label makes it clear that the product is not animal based, but rather a plant-based substitute for meat, dairy, eggs, or fish.

Precedent: South Korea: According to the Ministry of Food and Drug Safety of South Korea, alternative proteins will be formally addressed in the country’s National Plan for the first time in 2022. In order to “formulate a better regulatory environment for the alternative protein industry to thrive,” the government of South Korea has decided to include official guidance for alternative proteins in its National Plan 2022. This will be accomplished, in part, by establishing a transparent route to market for cultured meat.
A. Implementing Bans and Phase Outs

Regulation and policy reform in transforming South Africa’s food system must increasingly consider an animal law approach which incorporates the interests, sentience and intrinsic value of individual animals. This is aligned with Constitutional Court rulings and can be reflected as follows:

(i) The Constitution of South Africa should be interpreted to protect animal interests. The principle that “there be no arbitrary discrimination against any particular group without a justifiable reason” should apply to both human and non-human species. The Constitutional Court has explicitly recognised that the human right to environment as contained in section 24 includes animal welfare.

(ii) The logic underlying human rights provides the foundation for the protection of animal welfare, interests and wellbeing. These include ideals such as equality, autonomy, dignity amongst others, principles that should apply to animal beings as much as they should apply to human beings.

(iii) There should be a recognition of the intersection of interests between human and nonhuman animals as well as recognition of the fact that human development and survival should not come at the expense of other species and ecosystems.

(iv) Recognition of emerging environmental protection principles such as the proposed international crime of “ecocide” or the killing of ecology for example, should play an increasingly important role in regulation and law reform to transform the country’s food system so that the transformation mirrors international shifts and views. The proposed crime of ecocide calls for it not to be confined only to wanton or unlawful actions that harm the environment and ecosystems but that such a crime “should recognise that all forms of life, and the ecological systems that support them, have value for their own sake”.

There are many specific proposals which could be made in relation to the current regime for animals and specifically farmed animals. Government must initiate as a matter of urgency a legislative process which:

(i) includes the banning of certain practices and gradual transitions away from certain practices relating to animals; and

(ii) sets out specific regulated welfare standards for animals which are legally binding and enforced.

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146 Ibid


148 Anthony Burke and Danielle Celermajer (2021) ‘Human progress is no excuse to destroy nature. A push to make ‘ecocide’ a global crime must recognise this fundamental truth’ Human progress is no excuse to destroy nature. A push to make ‘ecocide’ a global crime must recognise this fundamental truth (theconversation.com) (accessed 3 September 2022)

149 Ibid

150 http://www.harmonywithnatureun.org/
Precedent: USA: At least 14 states in the USA have banned one or more forms of extreme confinement for farmed animals and many other states are in the process of implementing similar laws. Many other countries around the world have banned confinement and certain practices for animals used in agriculture.

B. Specific Welfare Standards for Animals in Agriculture including

Specific standards should be legislated for animal welfare for animals in specific contexts including in relation to their species and particular needs.

Precedent: European Union (EU): Council Directive 98/58/EC on the protection of animals kept for farming purposes provides general rules for the protection of animals of all species kept for the production of food, wool, skin or fur or for other farming purposes which includes fish, reptiles and amphibians. These rules are based on the European Convention for the Protection of Animals kept for Farming Purposes and they reflect the so-called “Five Freedoms”. Egg marketing legislation (1274/91), which provides that chickens must be reared in free-range systems is one such example.

C. Other Animal Law Reform

Given the plethora of issues with current regulatory regime and vast gaps, there are many more specific law reforms for animals. These must be properly captured within the regulatory framework and specifically in the Government’s new Animal Welfare Bill. Government must involve animal protection stakeholders in the drafting of the Bill before the public consultation process to avoid the bill being deficient and representing a perspective of increased production without sufficient safeguards.

RECOMMENDED INTERVENTION 5: ALIGNMENT OF SCIENCE AND RESEARCH WITH EXISTING POLICIES AND REGULATION

A. Ensuring Research, Data and Information relating to Realities and Harms of Animal Production as well as Incorporating Alternatives into Environmental Law and Policy

A concern is that environmental laws and the related policy and regulatory frameworks are scattered across different disciplines and mandate areas for government departments. As a result, implementation is lacking, or ineffective or public and stakeholder knowledge of the legal framework is lacking. This also leads to a lack of coordination amongst different government departments at national, provincial and local levels.

It is apparent that existing policies and legislation do not adequately factor in harmful consequences of industrialised animal agriculture nor the consumption of ASFs. Similarly, Alternatives are not considered nor featured in such policies. This is particularly apparent in climate change policies and laws but extend to environmental law and policy more generally.

153 https://food.ec.europa.eu/animals/animal-welfare_en
According to Climate Action Tracker\(^{154}\) The CAT rates South Africa’s climate targets and policies as “Insufficient”. The “Insufficient” rating indicates that South Africa’s climate policies and commitments need substantial improvements to be consistent with the Paris Agreement’s 1.5°C temperature limit.

Below are selected, non-exhaustive examples of regulation which must be reviewed, harmonised and aligned with latest scientific understanding and developments around the harmful consequences of industrial animal agriculture as well as the potential benefits of Alternatives.

1. South Africa’s Nationally Determined Contribution to incorporate animal agriculture as priority area. Inclusion of Alternatives as potential solution;
2. South Africa’s Climate Change Bill;
3. National Adaption Strategy;\(^{155}\)
4. Just Transition Framework;\(^{156}\)
5. Arresting animal agriculture, and in particular intensive animal agriculture should always be a key component on regulations seeking to address environmental harm and climate change such as the Carbon Tax Act (Act No. 15 of 2019); and
6. An analysis of existing legislation and new policies by the DFFE relating to the intensification of animal agriculture must be tested against South Africa’s climate change obligations and laws in order to determine whether they are aligned with current industrial animal agriculture. For example, some of these should include:
   a. Draft Game Meat Strategy;
   b. Aquaculture Development Bill.

**Precedent: European Union:** The EU is in the process of implementing “The Green New Deal”. The European Green New Deal is a road plan that outlines how to make the economy of the EU sustainable by transforming the threats posed by climate change and the environment into opportunities across all policy sectors and by ensuring that the transition is fair and includes everyone. Stopping climate change, reversing the loss of biodiversity, and significantly reducing pollution are some of the goals, which aims to improve resource efficiency by transitioning to a clean and circular economy. It describes how to secure a transition that is just and inclusive, as well as outlines the necessary investments and finance tools that are available. The ‘Deal’ encompasses the entirety of the economy, including but not limited to agriculture.\(^{157}\) The agricultural industry is highlighted as a priority in this plan. By, for instance, encouraging the production and use of novel sources of protein that can alleviate strain on agricultural land, the sector can help towards sustainability by better utilising aquatic and marine resources.\(^{158}\).

**B. Ensuring Research, Data and Information relating to Realities and Harms of Animal Production as well as Incorporating Alternatives into Agricultural Law and Policy**

An analysis of existing legislation and new policies relating to the intensification of animal agriculture must be tested against South Africa’s climate change obligations and existing regulatory framework in order to determine whether they are aligned with current industrial animal agriculture. For example, some of these should include:

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\(^{154}\) https://climateactiontracker.org/countries/south-africa/


1. Poultry Master Plan;
2. Draft Animal Welfare Bill;
3. Live Export Guidelines;
4. Proposed amendments to the Meat Safety Act to exclude game animals; and
5. In 2022, the Appropriation Bill allocated over R17 billion to the DALRRD, citing its purpose as providing “equitable access to land, integrated rural development, sustainable agriculture and food security for all”[^159] but it is unclear how much of this allocation, if any is directed towards Alternatives development.

**C. Ensuring Research, Data and Information relating to Realities and Harms of Animal Production as well as Incorporating Alternatives into Human Health Standards and Regulation**

Nutritional needs are at the centre of any food system, and this should be captured in the regulation of the food system and attendant standards to ensure the protection of human health. It must also be considered that many less affluent communities can be situated near animal production facility and are directly impacted due to water and air pollution from particulate matter (animal waste) as a result. This has impacts on their health and their families.

Similarly, other forms of pollution and harms associated with intensive animal farming affect the poor in the country more than the wealthy. Associated challenges include the issues of antibiotics and superbugs and the attendant impacts on animal and human health.

Protecting and promoting human health by addressing these concerns should therefore entail the following:

1. The State must be fully open to discussing the health impacts of certain ASFs and the potential benefits of their Alternatives and the outcomes of such discussions must be reflected in government’s food and health guidelines.
2. Government is encouraged to move away from the current focus on increasing production of animals and their use for economic, job creation and food security purposes without critically looking at available alternative options. The focus must be on ensuring that all food systems projects are not only measured economically, but a balanced approach must be used, and it should look at the environment/human health and animal health and wellbeing. The benefit of cases such as the recent *Shell*[^160] and *Liesbeek*[^161] (although based on consultation and participation), was that economic advantage should not always be seen as the most important factor.
3. Information on the impact of ASFs on different sectors of society such as women, children, the elderly, the poor, ethnic minorities etc. must be clearly articulated in government regulations to ensure appropriate and targeted interventions to protect the health rights of the affected groups and communities especially from a nutrition and health perspective.
4. Government is encouraged to ensure that regulatory frameworks are influenced more by the science and not industry interests, including the impact of CAFOs / industrialised animal operations on both animals and human health and create appropriate frameworks to address this outside the intensive farming and meat industry lobby.

[^160]: Sustaining the Wild Coast NPC and Sixth others v Shell Exploration and Production South Africa BV and Four Others, case number 3491/2021 Eastern Cape Division of the High Court
[^161]: Observatory Civic Association and Another v Trustees for the Time Being of Liesbeek Leisure Properties Trust and Others (12994 of 2021) [2022] ZAWCHC 2 (18 March 2022)
Government must also take more stringent measures to address zoonotic disease outbreaks. In the context of Alternatives, regulating issues such as nutrition, ingredients, processing and other factors must be considered in order to promote nutrition and human health.

**D. Ensuring Research, Data and Information relating to Realities and Harms of Animal Production as well as Incorporating Alternatives into Constitutional and Social Law and Policy**

Transforming South Africa’s food system should be done through engaging with people on the ground, communities, subsistence farmers, community leaders, indigenous peoples, NGOs and others to ensure inclusion. Engagement should not only be done with industry representatives.

Sustainability is critical to the promotion and protection of human rights and promotion of social justice in the context of the country’s food system. Reliance on ASFs places sustainability into question and the non-participatory nature of the current food system limits investment in small-scale farmers, with negative outcomes for sustainability.

The constitutional rights protections should focus on the whole gamut of rights as provided for in the Bill of Rights. Particular emphasis must be placed on the following aspects of these protections, ensuring that they are used to inform law reform and the transformation of the country’s food system:

1. In efforts to improve the nutritional and health rights of children, and healthy eating habits amongst children, the issue of ASFs and Alternatives should be included as part of law reform.
2. A cross section of laws created to operationalise the Constitution, such as laws on administrative justice, environmental laws, gender equality laws, consumer laws, children’s rights laws, tax laws, access to information laws and others must form the basis for creating an all-encompassing and inclusive food system transformation legal framework.

In South Africa such an enabling environment should be witnessed in the National Development Plan with establishment of initiatives such as Plant Based funds and Incentivised production systems for Alternatives. In addition, enterprises should be encouraged and incentivised to set standards in relation to targets on Broad Based Black Economic Empowerment (BBBEE) to facilitate broader participation production and transition towards Alternatives. The South African government has implemented similar initiatives in animal agriculture (i.e. poultry and goat value chain programs) and a similar investment in the meat Alternatives industry will see a major shift and transformation towards Alternatives to ASFs.

Such mechanisms could include for example:

A. Broad-based black economic empowerment (BBBEE) targets and requirements;
B. Specific requirements for ownership and involvement for certain demographics and participation such as for women and other groups;
C. Lower barriers for entry for vulnerable groups and previously disadvantaged individuals;
D. Exploration around use of indigenous seeds, communities, indigenous knowledge systems for the growth of the plants to make Plant-based Alternatives;
E. Specific scholarships and opportunities for education and training; and
F. Mechanisms to prevent vertical integration.

Given the emphasis of much of Alternatives on technology, there is a potential that many, including vulnerable populations may be left behind in these new industries. It is therefore critical that safeguards and mechanisms are put
in place to ensure accessibility to such technologies and/or to incorporate vulnerable populations and previously disadvantaged individuals into business models and the regulation of such Alternatives.

This can be done through existing BBBEE legislation or by placing restrictions and requirements relating to intellectual property such as patents on the Alternatives industry. Intellectual property (IP) rights, while they must be protected, should not be prohibitory for involvement and serve as a barrier for already excluded populations. People and communities must be empowered through technology and have a stake in such developments and innovations, and these should not be another way to further disempower vulnerable groups and create powerful oligarchies and monopolies.

**RECOMMENDED INTERVENTION 6: RESEARCH**

**A. Initiate Programs at Universities and Academic Institutions including Youth Empowerment and Development relating to Alternatives**

In addition to Governmental Funding, funding should be provided to research institutions at South African Universities in order that academics, students and other professionals may start to gather critical important data relating to Alternatives.

**Precedent: USA, California:** The Alternative Meats (Alt: Meat) X-Lab at UC: “The Alternative Meats (Alt: Meat) X-Lab at UC Berkeley helps entrepreneurs and researchers investigate the next generation of foods such as Plant-based meats, dairy substitutes, and alternative sources of fat and protein.”

Such programs should be intersectional with a focus on social justice, access and inclusivity to ensure that research and proposed solutions are inclusive.

**B. Develop Robust and Comprehensive List of Missing Research Information in South African Context and Develop a Research Roadmap and Agenda**

Whilst a lot of research and innovations have already gone into development and dissemination of Alternatives to bring it to where it is today, more research is required to facilitate complete transformation of the food system. Research needs will be required at different stages of the value chain from the growth of raw foods that will be used to produce meat Alternatives to the downstream processing of these into meat alternative products and their dissemination to consumers across all economic and other demographic classes. Current research has been driven mainly by the global North in terms of meat product targets e.g. burgers, patties etc. If Alternatives are to be used to address issues in South Africa including household food security, research needs to be undertaken to develop products that align with the relevant realities of South Africa and its demographics including in the different ethnic, racial and religious groups.

A high-level example of selected research that will assist with understanding current issues as well as transitioning South African food systems should include:

Research into ASFs

1. Externalities and true cost of animal agriculture and ASFs in the South African context;

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162 [https://altmeatlab.berkeley.edu/](https://altmeatlab.berkeley.edu/)
2. Benefits of transition away from animal agriculture;\textsuperscript{163}
3. Impact of ASFs and animal agricultural facilities on:
   a. communities close to such facilities; and
   b. workers implicated in these industries;
4. Compliance with existing laws by the industry – including the formal and informal sector, as well as the appropriate legal framework to support and regulate Alternatives, informed by a gap analysis of existing legislation;
5. Other harms of industrial animal agriculture across the spectrum (as have been further identified in this White Paper and the Working Paper);
6. Economic benefits for the country and communities, including in relation to employment creation;
7. Science and technology required for the development of alternatives;
8. Consumer preferences in order that Alternatives development can be tailored to meet specific needs and requirements of consumers, including nutritional and dietary needs. This includes research into the food pyramid and redesigning it to include alternatives;
9. Concepts of “food justice” and “food sovereignty” in the context of South Africa with a view to anchoring healthy food as a human right and address structural barriers to that right;
10. Approaches to removing barriers to transitioning from ASFs to Alternatives;
11. To contextualise the extent of the 10 categories of externalized cost in the South African agricultural and food system;
12. To consider and understand alternative models of food production that recognize South Africa’s specific context of climate, soil suitability, population, politics and social environment;
13. Impact of feed on health and environmental consequences as well as the welfare and wellbeing of animals (those consuming the feed and those that are often used as part of the feed); and
14. The role and place of environmental law, including biodiversity protection legislation and other areas of law in tackling harmful food systems.

Research into Alternatives:

1. Breeding and agronomy of plants and fungi to have (i) the right nutrient composition and (ii) to enable downstream processing into a meat alternative that simulate the meat it is intended to resemble in terms of texture, shape and appearance and taste. Research can include breeding crops for higher protein yields and also for ASFs using technologies such as molecular farming;\textsuperscript{164}
2. Broadening the basket of crops and other species that can be utilised as meat Alternatives “novel crops/species” with emphasis on locally produced species available to smallholder communities;
3. Technological methods to develop, store and package Alternatives;
4. Consumer research that will facilitate appropriate dissemination of applicable meat Alternatives to the diversity of consumers prevalent in South Africa;
5. Marketing research;
6. Policy and legal research to guide decisions by regulatory authorities in the best interest of sustainable agriculture, animal health and welfare and climate change;
7. Governance systems;


\textsuperscript{164}GFI 2021 state of the industry report Plant-Based Meat, Seafood, Eggs, and Dairy
8. Research on existing food systems towards sustainable green farming methods; and
9. Agro-processing and storage research to minimise food loss and food waste.

It is critical that such research be independent as well as open-access. Specific proposals relating to funding around research have been specified in the following sections.

**RECOMMENDED INTERVENTION 7: DEVELOPMENT**

Development of skills and knowledge relating to Alternatives in the country across the spectrum of Alternatives including production to cuisine. Alternatives should be incorporated into existing education, training and skills development programs and empower members of the public with a focus on vulnerable and previously disadvantaged groups. Development which involves and uplifts communities must be prioritised.

**RECOMMENDED INTERVENTION 8: INVEST IN AND FUND ALTERNATIVES**

A. **Fund Research: Public and Government Funding**

Increasing research through the establishment of dedicated plant based and cultivated meat centres and programs within universities, academic institutions and other research facilities in South Africa. For effective research, Government should apportion public funding to invest in and fund the research and development of Alternatives.

**Precedent: India:** In 2019, the Government of India’s Department of Biotechnology (DBT) granted $640,000 to Hyderabad-based institutes Centre for Cellular and Molecular Biology (CCMB) and National Research Centre on Meat (NRCMeat).

**Precedent: Netherlands:** In the Netherlands, private funding from industry, an enabling government policy and research and development from research institutions will all see an improvement in production and consumption of Alternatives.

**Precedent: Denmark:** The Danish government availed 1.25 billion kroner (€168 million) of funding to advance Plant-based foods, as part of an unprecedented climate agreement for food and agriculture. This funding is the largest investment in Plant-based research and development by any EU country to date. The funding agreement was endorsed on the acknowledgement that plant-based foods must be a “central element in the green transition” and commits the government to creating a national action plan for plant-based food with clear targets for production and sales. The Danish Plant based Business Association will serve on the fund’s board of directors while the money is being laid up for use after 2030. The Plant Fund was established by the Danish Agency for Agriculture.

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165 https://gfi.org/resource/open-access-research-is-needed-for-Plant-based-meat/
166 https://www.gov.za/links/education-training-skills-development-1
Precedent: United Kingdom: A study funded by the UK’s Foreign, Commonwealth & Development Office and the Climate Works Foundation, indicated that alternative proteins could support 9.8 million new jobs and bring $1.1 trillion to the global economy by 2050.171

Precedent: European Union: The European Union includes alternative proteins as a key research area in Horizon Europe’s $12 billion research and innovation program.172

Precedent: Singapore: Singapore has invested $144 million into various next-generation technologies intended to bolster its bioeconomy, including cultivated meat.173

Precedent: China: China has included cultured meat and other future foods in its five-year agricultural plan, which aims to support its long-term development goals.174

Precedent: Other Countries: It is reported that other countries such as Canada, Germany, India, Israel, Japan, and the Netherlands are making similar investments in relation to Alternatives.175

B. Fund Research: University and Academic Institution Funding (Public and/or Private)

In addition to Governmental Funding, funding should be provided to research institutions at South African Universities in order that academics, students and other professionals may start to gather critical important data relating to Alternatives.

Precedent: India: The Institute of Chemical Technology, Mumbai (ICT), and the Good Food Institute announced a plan for a Centre of Excellence in Cellular Agriculture to take on open access research and help private industry enter the sector.176

Precedent: USA: According to the GFI, the following funding for research into Alternatives has been initiated in the USA 177

- **USDA’s National Institute of Food and Agriculture (NIFA)** awarded $10 million over five years to Tufts University, Virginia Tech, Virginia State, University of California-Davis, MIT, and University of Massachusetts Boston to establish the National Institute for Cellular Agriculture, a flagship American cultivated protein research center of excellence.178
- **USDA NIFA** issued two awards totaling just shy of $1 million over two years for research at the University of Massachusetts Amherst on Plant-based meat production methods and Purdue University on pea protein functionality.179


173 https://gfi.org/blog/2019-03-29/

174 https://proveg.com/za/2022/03/chinas-five-year-plan-to-include-cultured-meat/


177 https://gfi.org/resource/open-access-research-is-needed-for-Plant-based-meat/


179 USDA NIFA. (2021). Functionalization of pea proteins using cold extrusion for applications that include emulsification and gelation. Purdue University. [Link: https://cris.nifa.usda.gov/cgi-bin/starfinder/?path=fastlink1.txt&id=anon&pass=&search=R=89999&format=WEBLINK]
• The National Science Foundation awarded $3.55 million in 2020 to a consortium of researchers at the University of California Davis to perform cultivated meat research over five years, marking the first federal investment in academic research on cultivated meat and a promising start to a new era in agricultural innovation.\textsuperscript{180}

There are also opportunities for research to be funded and developed in public private partnerships and between industry and developed in terms of public private partnerships. For example, the “Meat our Future”\textsuperscript{181} initiative in South Africa.

C. Create a Dedicated Government Fund for Alternatives

Precedent: Denmark: In terms of the climate agreement for food and agriculture, the Danish government will create a Fund for Plant-based Food Products, providing 675 million Danish kroner (€90 million) over nine years to support product development and promotion.\textsuperscript{182}

Precedent: European Union: Such fund can also include monies for “environmental technology”, will be expanded to include processing equipment for plant-based foods.

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**RECOMMENDED INTERVENTION 9: SUBSIDIES AND INCENTIVES**

A. Explore and Initiate Finance, Subsidies and Economic Incentives or Alternatives

Mass production of animals is cheaper and is evidenced by the cheaper prices of chicken, pork and fast-food meat products relative to plants and vegetables in South Africa and globally. Reduction in price parity will be a step toward making Alternatives affordable to the general population, facilitating the use of Alternatives to address SDG goals of zero hunger, food security and poverty alleviation and the achievement of constitutional rights.

Financial and economic interventions which make Alternatives more affordable and assist with obtaining price parity with ASFs including through:

1. Subsidies and financial incentives being provided to Alternatives and same being provided for in law and policy;
2. Tax relief on Alternatives (production, research, distribution, at point of sale/purchase); and
3. Other financial incentives and tools

will prove critical.

B. Incentivise producers, suppliers and stakeholders for good animal welfare, environmental and other relevant practices

Climate and Environmental Goals

Precedent: EU: Europe has developed the ‘green direct payment’ (or ‘greening’) program that supports farmers who adopt or maintain farming practices that contribute to EU environmental and climate goals. Through greening, the EU rewards farmers for preserving natural resources and providing public goods, which are benefits to the

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\textsuperscript{181} https://meatourfuture.org/

\textsuperscript{182} https://gfieurope.org/blog/denmark-plant-based-investment-in-climate-agreement/
public that are not reflected in market prices. EU countries have to allocate 30% of their income to support “greening”.\(^{183}\)

**Incentivise farmers for good animal welfare practices**

Producing animal sourced foods in a more sustainable and ethical manner costs money and farmers find it difficult to adopt practices that promote animal welfare without having sound information on the impact of such practices on animal productivity and their income.\(^{184}\) Incentives are there to encourage farmers to farm sustainably and ethically and can be provided by both the government and private stakeholders in the value chain.

**Precedent: USA:** The “*Environmentally Sourced Retailers Certification Program*” is an incentive program borne out of the *Forbes* AgTech Hackathon in the USA.\(^{185}\) One incentivising example from this is whereby retailers would pay $20 million to obtain the Sustainability Certification, with an annual $12 million fee to keep the certification. They would then decide on the use of the funds and in this case they decided that 40% could go towards implementing manure digesters in feedlots in their supply chain. Another 20% of the funds could cover the cost in mark-ups that slaughterhouses would have had to implement for grass fed producers, thus lowering the financial barriers for those kinds of producers from entering the supply chain. Another 10% could go towards research into what crops help neutralize carbon emissions in farm animals. The government and private stakeholders need coordinated efforts to incentivise those farmers who produce ASFs extensively versus those under intensive farming and those who do not practice dehorning, debeaking etc that compromises animal welfare and wellbeing.

**C. Investigation and Interrogation of Existing Subsidies and Payments to Animal Agricultural Industry**

A review by an independent third party should be conducted into existing financial incentives (broadly referred to as “subsidies” herein but include all types of payments made to the animal agricultural industry and other ways of reducing costs for them) in various forms being made within the animal agricultural sector. Such subsidies must be interrogated and understand in the context of other Government policies, commitments, goals and objectives as aforementioned, as well as in light of compliance by specific recipients of such subsidies.

Subsidies which are directed towards problematic activities, sectors and recipients which impact on animals, the environment and human interests must be prevented.

**D. Empower Farmers: New Farmers and Existing Farmers through Exploring and Funding Transitional Programs**

The South African Government should explore and set aside monies to fund:

1. New farmers for growing plant-based protein crops; and
2. Existing farmers to transition to non-ASF farming through transformational projects, whereby farmers are granted funds and other resources including training to transition to plant-based products.

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Precedent: Denmark: In terms of the climate agreement for food and agriculture, the Danish government will provide a five-year Plant-based Eco-scheme for farmers which will pay 580 million Danish kroner (€78 million) in bonuses to those who grow plant-based protein crops for human consumption.186

Precedent: USA: Farmers are transitioning from farming animals to farming hemp through a program entitled “Transfarmation”.187 Other programs such as Rancher Advocacy Program188 sets out Transition Models for farmers which include from: Ranch to Sanctuary; Ranch to Plant Based Farm – Distribution Contract with a Plant Based Food Company; Ranch to Solar Energy Farm; Ranch to Wind Energy Farm; Ranch to Veganic Agriculture; Ranch to a Lab Grown Meat Facility (this model is not available yet but will be in the future); Ranch to Feed Store Business Model; Ranch to Rewilding Scenario; Ranch to Community Farmers Market; Ranch to other

Precedent: United Kingdom: The Grow Green campaign is calling for a strategic policy approach to a transition where there are opportunities for landowners and farmers to meet the needs of the UK population by managing land in a different way including through transitioning to arable, horticulture or other plant-based production systems.189 Such potential programs should be explored further in the South African context given its unique climate, geography, landscape and context and research must be conducted into whether these and other potential programs aimed at empowering farmers with more sustainable opportunities are feasible.

RECOMMENDED INTERVENTION 10: GOVERNMENT POLICIES, PROCUREMENT AND PROGRAMS

A. Government Procurement

Government should lead by example in its own behaviours by promoting change. Given that Government utilises public funding, it must ensure that such monies are not spent on harmful industries.

National, provincial and local governments must implement policies and ensure policies which reduce the purchase of ASFs including meat, dairy, and egg products and they must increase the procurement of Alternatives.190

At government events, specific effort should be put into reducing the consumption of ASFs and including Alternatives and the food served should follow the EAT-Lancet diet for personal and planetary health. This will be particularly important in the context of South Africa, where traditionally, meat is heavily consumed.

In undertaking such procurement, government and its departments and entities at all the different spheres must be guided by section 217 of the Constitution which requires that they “do so in accordance with a system which is fair, equitable, transparent, competitive and cost-effective.”

187 https://thetransformationproject.org/
188 https://rancheradvocacy.org/transition-models/
189 https://www.vegansociety.com/take-action/campaigns/grow-green/farmers
191 The EAT-Lancet recommended diet for human and planetary health suggests significant decreases in meat and milk consumption that reduces pressure on the land and carbon release through over-grazing or conversion of land into pastures.
B. Government Policies

Government policies, specifically internal policies must be reviewed and amended to specifically incorporate Alternatives and a transitioned shift away from ASFs.

C. Government Programs

Social interventions such as including Alternatives in social welfare programs through provision of vouchers for Alternatives and including Alternatives in other programs of the Department of Social Development must be considered and undertaken. This can be reinforced by the creation of and provision of support to consumer groups, especially in under-privileged communities, that can buy Alternatives in bulk – sharing costs and accessing economies of scale.

This includes across all ages and programs. For example, incorporating Alternatives into the National School Nutrition Program\textsuperscript{192} by the Department of Basic Education (DBE).

RECOMMENDED INTERVENTION 11: COMPLIANCE, AUDITING, PUBLICATION

A. Enforcement of Existing Laws by Animal Agriculture – Both Formal and Informal Market

The available laws, disparate and scattered as they may be, offer a good starting point for a legal and constitutional reform agenda that provides better protection for animals, humans and the environment, provided a holistic approach that facilitates enforcement is taken. This must be taken in light of the interconnected nature of the issues at hand. Due to the anthropocentric nature of the legal system, animals and animal issues in particular are covered under aspects of environmental law, food law, animal welfare and protection, human health, animal health and disease control, amongst others. There are a few animal-centric pieces of legislation. However, there is increasing acknowledgment that animals require special, specific and comprehensive protection and recognition in law.\textsuperscript{193} It is essential that there is better enforcement of existing laws, including for example the Animals Protection Act, the Meat Safety Act and environmental legislation such as NEMA, NEMAQA and NEMWA to name a few. Dedicated resources should be provided to enforce such legislation and this should not be left up to NGOs such as the NSPCA, when it relates to animal welfare specifically.

There is furthermore a major gap in understanding the compliance with existing legislation in the informal agricultural sector. This impacts many interests and should be further explored and interrogated.

B. Database: Auditing, Publication of Non-Compliance and Violations

In the spirit of transparency and accountability, members of the public should be able to access non-compliance and violations of existing laws by the industry.

For example, at present, a member of the public cannot easily ascertain which producers and suppliers of animals have been found to be in non-compliance with the Animals Protection Act nor can they access information around

\begin{itemize}
  \item [192] https://www.education.gov.za/Programmes/NationalSchoolNutritionProgramme.aspx
  \item [193] Wilson, Amy P, Animal Law in South Africa: ‘Until the Lions Have Their Own Lawyers, the Law Will Continue to Protect the Hunter’ (December 1, 2018). WILSON A.P., Animal Law in South Africa: “Until the lions have their own lawyers, the law will continue to protect the hunter”\textsuperscript{d}A. Derecho Animal (Forum of Animal Law Studies) 10/1 (2019) - DOI:10.5565/rev/da.399, Available at SSRN: https://ssrn.com/abstract=3542042
\end{itemize}
warnings, citations and other actions taken by relevant enforcement including the DALRRD and the NSPCA. Given that animal welfare is a matter of public interest, such information should be available and would force accountability by both industry and enforcement bodies.

Mandatory Auditing of animal welfare is critical and plays an important role in ensuring that there is communication and information to other actors including retailers, manufacturers and consumers about the animal and related products’ production processes at specific farms and how this impacts the welfare and rights of the animals. This way, these actors are able to engage with facilities that provide better protections and disengage or not engage with those with poor animal welfare and wellbeing approaches. In addition to ensuring informed decision making for consumers, auditing can also assist in prosecution of those that fail to abide by set regulations and standards.

Similarly, non-compliance and legislation relating to environmental protection, food safety and health-related matters (among others) should be available to the public. This is aligned with constitutional rights to information.

Creating a central repository of non-compliance and violations with existing legislation would be a critical tool in ensuring a more transparent and just food system.

### RECOMMENDED INTERVENTION 12: PENALTIES

**A. Penalise Products from Intensive Systems of Production**

The South African Health Promotion Levy on Sugary Beverages\(^\text{194}\): which was a levy in support of the Department of Health’s deliverables to decrease diabetes, obesity and other related diseases in South Africa is a good learning point.

Many states have contemplated adopting a meat tax, which is a tax is levied on meat and other animal products to help cover the health and environmental costs that result from using animals for food.\(^\text{195}\)

**Precedent: EU:** Consumers in Europe are prepared to adopt the meat tax if, as a result, it ensures lowered cost of vegetables and plant-based diets.\(^\text{196}\)

With respect to other types of penalties, harsher penalties must also be levied for non-compliance with existing laws including but not limited to animal protection legislation, environmental legislation and others.

### RECOMMENDED INTERVENTION 13: LABELING, MARKETING AND ADVERTISING

**A. Labeling Requirements: Animal Welfare and Wellbeing Standards and Regulation**

Labelling regulations should provide information for consumers relating to animal welfare with a view to ensuring informed decision-making by consumers. Currently, labelling is aimed at protecting the health, wellbeing, and safety of consumers with limited consideration for labelling that seeks to protect the interests of the concerned animals.

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\(^\text{196}\) https://www.foodnavigator.com/Article/2021/01/27/Meat-tax-German-French-and-Dutch-consumers-support-price-hikes
However, these are interconnected issues and current requirements fall short. For example, consumers should be made aware of the methods and types of production of animal products.

**Precedent: South Africa:** An example can be found in the Agricultural Product Standards Act, 1990 (Act No. 119 of 1990), that regulates the grading, packing and marking of eggs intended for sale in the republic of South Africa and requires production systems to be included on packaging.

This can improve animal welfare by unlocking the available but untapped market demand for products that can prove higher animal welfare considerations. This way, consumers can also exercise their “right to make informed decisions in accordance with their moral and belief systems and be assured that the labelling is independently verified and verifiable.”

**Precedent: European Union:** In recent years, an increasing number of EU consumers have voiced a need for more information about the treatment of animals on farms. Some products have animal welfare information available, either as a result of government mandate or private initiative. Animal welfare claims are optional with the exception of eggs. On the other hand, the European Union has not standardised its regulations for the vast majority of consumer goods. The European Commission therefore plans to consider potential approaches to animal welfare labelling as part of the EU Farm to Fork Strategy to increase the efficiency with which value is transmitted along the food supply chain. The EU Commission this year (2022), has published a report on animal welfare labelling. Germany has already begun the process of potentially introducing mandatory labelling requirements for the welfare of agricultural animals. The Ministry of Food and Agriculture published a draft bill on the matter.

**B. Labeling Requirements: Climate and Health as Examples Animal welfare and wellbeing standards and regulation**

Increasingly, there are efforts to offer consumers of products greater transparency of the potential harms and impacts of their products.

A clear existing example of this can be seen in product warning labels on products and marketing relating to products such as alcohol and cigarettes.

**Precedent:** Similar standards are being implemented for ASFs in the context of health warning labels.

**Precedent:** Other potential labeling relates to environmental harms and climate impacts of ASFs such as carbon labels including on GHG emissions of products.

These initiatives are aligned to consumer protection legislation in South Africa and their goals.

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197 UK Department for Environment Food and Rural Affairs ‘Labelling for animal welfare: Call for Evidence’ (2021) 11
204 https://www.forbes.com/sites/briankateman/2020/07/20/carbon-labels-are-finally-coming-to-the-food-and-beverage-industry/?sh=71e401e87e03
C. Restrictions on Labeling, Marketing and Advertising

In order to avoid issues such as humane washing and greenwashing, certain terms are being regulated for use on products and more specifically the restriction of the use of such words.

There is increasing litigation around this issue in the various jurisdictions in the world.

**Precedent: Netherlands, City of Haarlem:** Starting in the year 2024, the city of Haarlem is going to make history by being the first municipality anywhere in the world to introduce a legislation that would make it illegal to advertise and display meat products in public places.205 This ban will affect advertisements displayed on billboards, advertisement screens, and at bus and tram stations.

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### RECOMMENDED INTERVENTION 14: EDUCATION INITIATIVES AND AWARENESS

The KIIIs indicated that:

1. There is no education in schools on the impacts of climate change from industrialised farming systems and minimal, if any, education on the benefits of a primarily plant-based diet for personal and planetary health.
2. Resultantly, the public grow up believing that the existing food systems and meat-based diets are integral and it becomes very difficult to change their minds as they get older.
3. The biases attached to animal food sources causes a disregard for research regarding the harms of certain animal food sources, and this does not favour the consumer’s well-being.
4. Members of the public are generally unaware of the practices and/or harms associated with industrial animal production and as a result are unable to make decisions on the consumption of meat produced in this manner.
5. There is minimal to no information on this topic in the shopping environment where consumers primarily buy these products, so it must be understood that consumers are largely unaware of the consequences of such reliance and dependence on meat products. Instead, consumers opt for options that are readily available/affordable and products that they have deemed culturally and traditionally important for decades i.e. meat.

The following initiatives are critical in promoting the production, distribution and consumption of Alternatives amongst South Africans:

**A. Review and Update Nutritional and Food Guidelines / Food Pyramids**

During a consultation that took place between the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO), the fundamental ideas behind food-based dietary guidelines (FBDGs) as well as the scientific evidence-based methodology for their preparation and application were conceptualised and designed.206

In the scientific literature on nutrition, FBDGs are frequently mentioned as a strategy that can be applied to achieve optimal health and nutrition. According to the South African food guide, there are seven different food groups that

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should be consumed on a regular basis. These food groups include starchy foods, vegetables and fruits, dry beans, peas, lentils, and soya; poultry, fish, meat, and eggs; milk, maas, and yoghurt; fat and oil; and water. However, it appears as if South Africa’s FBDGs have not been updated since around 2013, nearly a decade ago. It is critical that these are updated to include developments since then.

The FBDGs positively encourage people to eat plenty of vegetables and fruit every day as well as to eat dry beans, split peas, lentils and soya regularly. However, they also encourage people to have milk, maas or yoghurt every day and also indicate that fish, chicken, lean meat or eggs can be eaten daily. Importantly, the current guide separates out sources of protein into plant-based forms of protein and animal-based sources which is problematic for perceptions and similarly it does not include Alternatives.

Considering the above, government should initiate a process to update the nutritional and dietary guidelines and food pyramid to educate people around the harms of eating ASFs as well as emphasise consumption of Alternatives, specifically plant-based foods and healthy and nutritional Plant-based Alternatives.

**Precedent: Netherlands:** The recommended food guidelines from the Netherlands include for example: “Eat less meat and more Plant-based foods, and vary with fish, pulses, nuts, eggs and vegetarian products.”

**Precedent: Canada:** Canada’s Food Guide states that “Most people living in Canada would also benefit from replacing some of the animal-based protein foods in their diets with plant-based protein foods, such as legumes, tofu, nuts and seeds.”

Regulation should also address and help in understanding the nutritional value or lack therefore of both ASFs as well as Alternatives (including highly processed proteins), whilst ensuring the proper regulation of emerging industries and products such as Cellular-based Alternatives.

Providing education and awareness, including on some of the potential benefits and positive aspects, as well as considering the harmful and negative aspects and impacts. This also encompasses counteracting stigma associated with consumption of Alternatives and educating people residing in poorer communities about Alternatives and their associated health and other benefits.

**B. Early Education and Awareness**

There should be education at school level on the realities of animal agriculture including certain practices as well as the dangers of industrialised farming. Children should be exposed to Alternatives at an early age as well as educated about the benefits of Alternatives including for the climate and health.

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207 Food and Agriculture Organisation of the UN ‘Food Based Dietary Guidelines – South Africa’


These should include humane education around farming practices of animals. An approach to education where the sentience and intrinsic value of animals is brought to the attention of children at an early age as they begin to make conscious decisions about their food choices is critical. This will require education of the educators.\textsuperscript{211}

Certain jurisdictions have mandated humane education as well as education around environment in school curricula.

**Precedent: USA:** Certain states in the USA have laws relating to the use of animals in school and classroom activities, as well as laws that mandate the teaching of respect for, and humane treatment of, animals.\textsuperscript{212}

### C. Community Education and Awareness

One way to counteract stigma associated with Alternatives would be to educate people residing in poorer communities about Alternatives and their associated health benefits. Although there is increasing information available on Alternatives as a result of advocacy efforts and the work of advocacy groups, the platforms in which this information is made available is not necessarily accessible to everyone, particularly the poor segment of the South African population who happen to be the majority. Currently, this debate seems to be mostly an upper and middle class one. This has the potential to strip the initiative of any form of legitimacy and render it a class issue. The shift to Alternatives must therefore be driven from the bottom up and it has to resonate with every sector of the South African society.

### D. Institutions

Availability of Alternatives at institutions including both public and private will assist with awareness around such products: for example, in public institutions such as schools, universities, hospitals and prisons, among others. Incorporating Alternatives as part of school lunch programs has been done in legislation in other jurisdictions.

**Precedent: USA, Illinois:** House Bill 4089 requires that as a part of the school lunch program, requires a school district to provide a plant-based school lunch option to those students who submit a prior request to the school district requesting a plant-based school lunch option.\textsuperscript{213}

Other jurisdictions have mandated making such Alternatives available in institutions.

**Precedent: USA, California:** Senate Bill No. 1138 would require the food provided to those inmates to include the availability of plant-based meals. The bill would require the Department of Corrections and Rehabilitation to develop a plan to make available the plant-based meals on an overall cost-neutral basis.\textsuperscript{214}

### E. Product Placement / Promotion

Early education and community awareness should be augmented by efforts to make Alternatives more accessible in townships and rural areas, including ensuring that grocery stores (within townships and rural areas) as well as markets to the extent feasible have Alternatives at affordable prices. This helps to ensure that when people are educated about the benefits of Alternatives, they are readily available within communities, including at spaza shops and in rural community shops. This is important because lower income groups are more concerned about meeting their basic food needs before they can worry about the environment, animal cruelty and health. Without such initiatives, Alternatives will not be available to the general public.

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\textsuperscript{211} See work done by the Humane Education Trust in South Africa: https://www.animalvoice.org/

\textsuperscript{212} https://awionline.org/content/humane-education-laws-state


\textsuperscript{214} https://legiscan.com/CA/text/SB1138/id/1820342
To address issues of availability, large corporations such as supermarkets, fast food outlets and restaurants should therefore be urged to and be provided with the requisite incentives to increase the number and amount of Alternatives and display these in a manner and place these on shelves where they are accessible to the consumer.

### RECOMMENDED INTERVENTION 15: ENDORSEMENT AND SUPPORT

There are several international initiatives which the South African government can endorse or support which will assist with the transformation of South Africa’s food system. While these are not necessarily legally binding, they illustrate a clear intention by the government to transition and will encourage further action by state, industry and members of the public.

#### A. Plant-Based Treaty

Endorsement of the Plant Based Treaty\(^{215}\) by Government and individual cities and municipalities: This is because “Just like the Paris Agreement, the Plant Based Treaty recognizes that no one single country can tackle the ecological impact of animal agriculture by itself. A global solution to a global emergency is essential to avert a climate catastrophe.”\(^{216}\)

The treaty aims to 1. Relinquish, 2. Redirect and 3. Restore, by ensuring:

1. No land use change, ecosystem degradation or deforestation for animal agriculture;
2. An active transition away from animal-based food systems to Plant-based systems; and
3. Actively restoring key ecosystems, particularly restoring forests and rewilding landscapes, respectively.\(^{217}\)

**Precedent**: 18 cities have endorsed the Plant-based treaty which include:\(^{218}\)

1. **India**: Bhuj City; Bhujpur City; Jabalpur City; Nagpur City; Amravati City; Thane City; Vadodara City; Ahmedabad City; Bhavnagar City; Mundra City; Jamnagar City; Rajkot City; Sonipat City; and Gandhinagar.
2. **Argentina**: Rosario, Sante Fe Argentina; and City of Buenos Aires.
3. **United Kingdom**: Haywards Heath.
4. **USA**: City of Boynton Beach, Florida.

Also in the USA, the City of Los Angeles: On September 6, 2022, a Plant Based Treaty Resolution was presented by Los Angeles City Council members Paul Koretz and Marqueece Harris-Dawson, seconded by Council member Kevin de León, to request that Los Angeles formally endorse as a city, and include in its federal legislative program “SUPPORT for the United States to enter into a Plant Based Treaty and make a Plant-based approach to food and food purchasing a centerpiece of its greenhouse gas emissions policy.”

\(^{215}\) [https://plantbasedtreaty.org/](https://plantbasedtreaty.org/)

\(^{216}\) See [https://plantbasedtreaty.org/why-pbt/](https://plantbasedtreaty.org/why-pbt/)

\(^{217}\) See [https://plantbasedtreaty.org/](https://plantbasedtreaty.org/)

B. Animal Initiatives

**Universal Declaration of Animal Welfare:** Government can join in the support for a Universal Declaration of Animal Welfare (UDAW). This declaration is a proposed intergovernmental global agreement to permanently abolish animal cruelty by recognising that “animals are sentient and can suffer”.219


**Convention on Animal Protection**221: The Convention on Animal Protection for Public Health, Animal Welfare, and the Environment (CAP), a treaty proposal that addresses this global problem by establishing certain minimum standards of state conduct and prohibition or regulation of high-risk activities. The CAP seeks to minimize risk of new pandemics by controlling the risk of transmission of zoonotic viruses and other pathogens through limiting inappropriate human contact with animals.

C. Nature Initiatives

**Rights of Nature including the Universal Declaration of the Rights of Mother Earth**222: The Declaration of the Rights of Mother Earth223 and the United Nations in Harmony with Nature Programme224 are examples of policies as well as legislation where the rights of nature are explicitly recognised. These assist with protecting the integrity of the environment on which all humans and animals rely, and which provide the food needed to survive.

**30 by 30 Initiative:** This global initiative requires that action is taken we must protect at least 30 percent of our lands, rivers, lakes, and wetlands by 2030 The USA Federally, has included this initiative through an Executive Order made by President Joe Biden.225

4. CONCLUSION

There are many other examples of important interventions which can push the needle to transform South Africa’s food system, however this Section has aimed to provide a few overarching Recommended Interventions and to highlight more specific examples of how these may be more specifically implemented in South African law and policy. Particularly, it sought to illustrate how other jurisdictions around the globe are taking progressive steps to transform their food systems and create a better life for all.

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220 https://www.globalanimallaw.org/gal/projects/uncahp.html
221 https://www.conventiononanimalprotection.org/who-we-are
223 https://www.garn.org/universal-declaration/
224 http://www.harmonywithnatureun.org/
1. Tools and Timelines

The regulatory framework on transforming South Africa’s food system must take an integrated and holistic approach in order to address emerging and existing issues that impact rights protection and the promotion of social justice in the country’s extant food system. Specific legislation and regulations which regulate the specific uses of animals in terms of animal agriculture including aspects pertaining to animal welfare, environmental, food safety and health, consumer protection and other social justice aspects is a prerequisite.

While there are undeniable challenges within the regulatory system, recently, the judiciary has made progressive rulings for animals and in the interests of social justice and the environment. Such progressions must be actively incorporated into law and policy in order to be effective.

The trend towards intensive industrialised livestock production needs to be arrested and reversed, to reduce the impact of the sector on the environment generally, and on anthropogenic emissions in particular, and to improve food security, economic development, social justice and ethics. There is a need to encourage a major shift from current industrial agriculture to transformative activities such as conservation agriculture (agro ecology) that support the local food movement, protect smallholder farmers, empower women and other vulnerable groups, respect food democracy, maintain environmental sustainability and facilitate a healthy diet.

Shifting from animal sourced foods to alternatives made from plants and cellular agriculture can be achieved by addressing the barriers identified including those relating to cost; availability; accessibility; perceptions; knowledge and awareness and others in order to facilitate transformation of SA food systems.

While the main focus throughout this White Paper has been on Governmental action including law and policy such as:

1. **Creating an enabling environment** to produce, supply and consume alternative meats. (Compared to the current ruling by DALRRD on meat analogues which is a deterrent to the promotion of meat Alternatives).
2. **Compliance driven transformation**: South Africa is signatory to a number of international treaties that will benefit from a reduction in animal agriculture and a shift towards meat Alternatives. Such treaties include climate change and GHG emission treaties, biodiversity treaties amongst others. South Africa’s contribution to GHG is higher than for other African countries and animal agriculture is one of the culprits. The compliance driven transformation can therefore work by making farmers and producers of agricultural products accountable to the thresholds set for pollution and degradation of natural resources and GHG emissions and global warming.

Other stakeholders can practically affect and achieve such change through:

3. **The consumer to trigger a demand driven transformation**: Consumer driven transformation of the food system can have relatively short-medium term strategies. Public awareness campaigns are capable of changing consumer...
behaviour within a short space of time, while formal education or integrating learning about health diets and consequences of eating choices relatively take longer periods of time.

4. *The industry to trigger a supply driven transformation:* Currently cost, availability, accessibility are some of the major promoters of ASFs and deterrents to consumption of Alternatives, specifically Plant-based Alternatives. If the industry is facilitated to produce more Alternatives cost-effectively, that will drive the cost of Alternatives down and attract consumers to consume more of the Alternatives. A supply driven transformation associated with lower cost of Alternatives will appeal to South Africa, which is characterised by considerable levels of unemployment poverty, and inequality.

5. *Market Research and Forecasting:* Food producers and industry are business minded and profit driven and as such substantial market research and forecasting must be undertaken before we see either (i) start-ups companies focusing on Alternatives or (ii) existing companies transitioning their portfolios towards meat.

6. *Social movements:* According to the Consortium of International Agricultural Research Centers (CGIAR) report on changing diets and transforming food systems,

   “Citizen-led, social media and social movements can create new social norms and sow the seeds of widespread behavioural change, shortening the distance with more top-down policies.”

   citing how civic society can help bring awareness and drive societies into new norms quicker.

In South Africa there are quite a fair portion of civic groups that can facilitate this transformation including groups interested in (i) animal protection (including rights, welfare and wellbeing); (iii) human rights and social justice (including racial and gender equality) and (iii) environmental protection (including environmental protection, sustainability, global warming and climate change initiatives) and others.

This coupled with the Constitution provides a framework for the transformation of South Africa’s food system.

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This White Paper aimed to highlight some of the problems within the existing food system as well as carve a path forward to transform it.

South Africa has a long way to go towards achieving a just and inclusive food system, however, it has the opportunity to utilise progressive policies from other jurisdictions and implement these as appropriate within the South African context.

Importantly, South Africa has the advantage that industrialised animal agriculture is not yet as entrenched in the country as it is in others and therefore, there is an opportunity for it to leapfrog over this extremely problematic way which harms animals, people and the environment. In this way, the nation may become a leader on the African continent and globally and can reap social and economic benefits for its people.

If the South African Government has the foresight to embrace Alternatives, it has the opportunity to correct injustices within the current food system and truly empower people and leaves no one behind. This will put South Africa on a path towards achieving not only the right to food, but the other rights contained in the Constitution.

**With a little seed of imagination you can grow a field of hope.**

— African Proverb
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This White Paper is as a result of the preliminary research and the review performed by ALRSA and the co-authors as at the published date. It is informed by a high-level review and Working Paper published on 18 July 2022 intended to provide only a summary of certain issues which may be relevant to the topic. It is limited in scope based on various factors. This is a non-exhaustive White Paper meant to stimulate debate, research and law reform in the area of animal law and food systems and requiring further context and information in relation to all of the issues included herein.

ALRSA has focused on selected regulatory aspects and has not considered all legal, economic, political, social, environmental, technological, and other relevant aspects pertinent to some of these issues. All such factors should be considered when pursuing any further work or research.

It is also important to note that the focus of this White Paper is on highly industrialised animal agricultural practices. Given the various types of systems, these all have different considerations and consequences. Certain of the statements, observations and recommendations do not and will not apply to small scale and extensive farming nor to other less harmful methods of animal agriculture and should not be constituted as allegations. Many of the practices mentioned relate to large scale industrialised animal operations and do not necessarily apply to all animal farming facilities, operations or activities.

It is explicitly recognised that not all animal agriculture is conducted in the same manner, and it is dependent on the particular farmer, facility, method of farming, geographic location and various other factors. Therefore, only generalised statements and recommendations are made focusing on harmful industrialised animal agriculture which may not be applicable to or appropriate for all animal agriculture and animal production.

In relation to Alternatives to animal agriculture, not all Alternatives are the same and all have different consequences and considerations. Given that many of these are new and emerging, much more work and research needs to be done to properly understand these. This is particularly true for products such as Cellular-Based Alternatives.

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