

A Welsh Food System Fit For Future Generations

A report by the Sustainable Places Research Institute at Cardiff University, commissioned by WWF Cymru

By Dr Angelina Sanderson Bellamy and Prof Terry Marsden



Sustainable Places
Research Institute

Sefydliad Ymchwil
Mannau Cynaliadwy





Shea Buckland-Jones

Foreword

WWF Cymru's aim is to help create a Wales where people and nature can thrive, for generations to come.

Our work on sustainable development helped the passing of the Well-being of Future Generations Act into law in Wales in 2015. We want to see transformational change in the way that government thinks and acts - developing an approach which makes decisions in a joined-up, strategic way that considers the needs of the Wales and the world of the future.

We believe that the food sector provides the perfect opportunity to demonstrate the difference the Act can make to improved outcomes.

A well-functioning food system is crucial to our nation's future. It's central to our health and wellbeing, our culture, society and economy. Environmentally, it's an important part of addressing the climate and nature crises we now face.

With this in mind, we commissioned the Sustainable Places Research Institute at Cardiff University to produce this report to help us understand what a food system fit for future generations could look like in Wales. The report is ambitious in providing ideas for immediate action as well as further discussion and research.

Despite agreement on the important contribution food makes to Wales' future prosperity and sustainability, there are divergent opinions on which interventions to pursue. We therefore hope this paper will provide a useful contribution to the future food debate. We would like to thank the Sustainable Places Research Institute for conducting this research and preparing a vision for the future of food in Wales.

Shea Buckland-Jones

WWF Cymru

Food, Land Use and Nature Policy Manager

About the authors



Dr Angelina Sanderson Bellamy,

Dr Sanderson Bellamy is a Research Fellow in the Sustainable Places Research Institute. Her expertise encompasses food production systems, land use and land cover change, ecological resilience and ecosystem services. She uses a social-ecological framework and interdisciplinary methods to investigate the drivers, particularly governance and support structures, of environmental change and the impact of land management on the delivery of ecosystem services. Her experience draws from working across Latin American and UK food landscapes, and she is the Principle Investigator for TGRAINS, a UKRI-funded project on how to make UK regional food systems healthier and more environmentally sustainable.



Professor Terry Marsden

Terry Marsden currently holds the established chair of Environmental Policy and Planning in the School of Geography and Planning at Cardiff University. He is Director of the Sustainable Places Research Institute at Cardiff. He researches the interdisciplinary social science and applied policy fields of rural geography, rural sociology, environmental sociology, geography and planning. Terry has published over 150 international journal articles, book chapters or books. This includes 20 research monographs and edited collections. This body of work ranges from original theoretical work in the field, through to empirical analysis and emerging policy impacts and analysis. It includes wide ranging work on: the socio-economic restructuring of agriculture; theorisations and empirical investigations of rural development; analysis of agri-food chains and networks; and critical commentaries in the emerging fields of environmental sociology.

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Executive Summary

How to deliver healthy, nutritious food for all in the face of shrinking resources and a growing population, while addressing climate change and biodiversity loss, is a major challenge both globally and for Wales. A raft of recent reports have highlighted the need for food system change.¹ We have an opportunity in Wales to design a food system that works hand-in-hand with nature and truly delivers well-being for future generations.

The Welsh food system forms part of a wider, international system, with much of our food economy integrated into UK-wide networks. This is recognised throughout the report, but the report's focus is on those issues where Wales has devolved authority to act. The Well-being of Future Generations Act, in particular, gives us the opportunity to adopt a leading role in the UK in developing food policies, within the wider UK context of Brexit and the severe challenges the UK food system faces.

Our food system encompasses a wide range of activities from farm to fork. A supply chain of producers, manufacturers, processors and retailers operates locally and globally, with consumers enjoying products from across the world as well as from local food businesses. The food system is a vital component of our economic, environmental, social and cultural well-being. It feeds us, provides jobs, and supports communities and culture.

But there are systematic problems that need addressing urgently too. Many people in Wales cannot afford access to a healthy diet. The food system has negative impacts on the environment, public health and economic well-being. This hinders our ability to prosper as a nation both now and in the future.

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Affordability and diets:

recourse to food banks is rising, with The Trussell Trust network providing 113,373 three-day emergency food supplies in Wales in 2018-2019.ⁱⁱ One in five of people in Wales worry about running out of food due to lack of funds according to the Food Standards Agency,ⁱⁱⁱ and 160,000 children in Wales live in households for whom a healthy diet is increasingly unaffordable.^{iv} Meanwhile, rising rates of obesity cost the health service £73 million per year.^v 28% of children are obese, while 94% don't eat the recommended five portions of fruit and vegetables a day.

Environmental impacts:

The Welsh government has declared a climate and nature emergency. Wales's first *State of Natural Resources* report^{vi} concluded that none of Wales's ecosystems have all the attributes required for resilience. Wales's wildlife continues to decline according to the *State of Nature 2019* report^{vii}, with the latest findings showing that one in six species are at risk of extinction.^{viii} Unsustainable agricultural management is the single largest driver of biodiversity decline,^{ix} while agriculture accounts for 12% of Welsh greenhouse gas emissions.^x Our food consumption also has global impacts, with palm oil in packaged foods and soya grown to feed livestock driving deforestation.^{xi}

Economic well-being:

Many working in the food industry receive low pay and many farmers are highly dependent upon current EU subsidies. The uncertainty of post-Brexit payment support and the potential impacts of Brexit on UK export markets make this a deeply concerning time for many in the food industry.



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Wales urgently needs to create an integrated, sustainable and just food system fit for future generations.

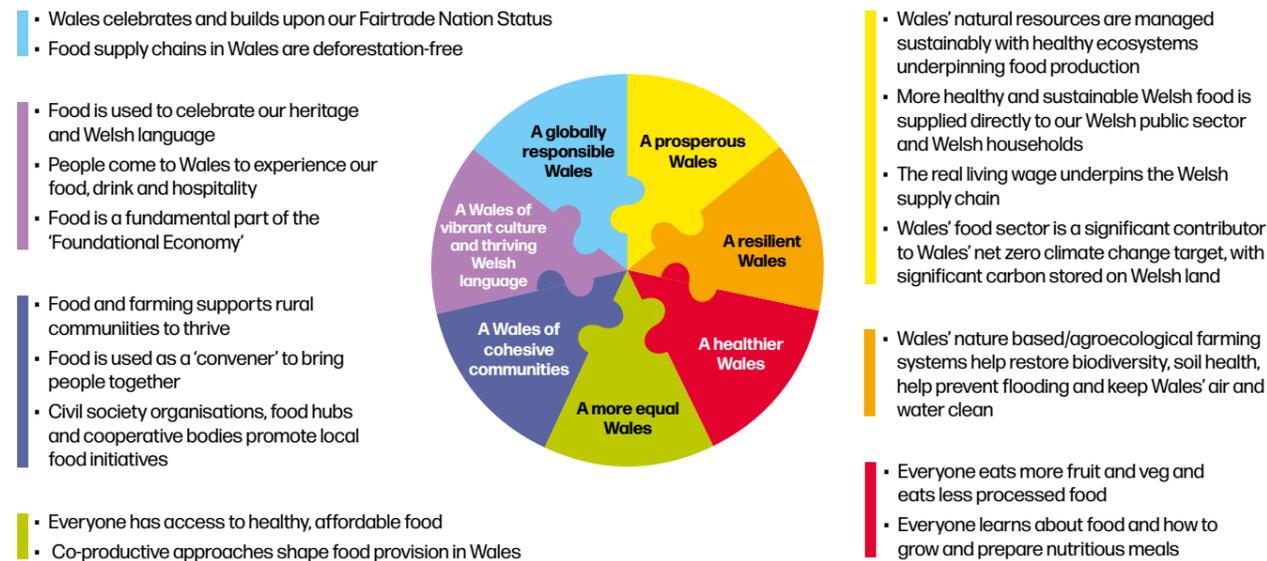
The Well-being of Future Generations (Wales) Act provides the vision and levers needed to achieve this transformation. It can facilitate a more joined-up approach across the food system, for example by linking agricultural policy with health policy, and connecting the food we produce in Wales with the food we consume.

The food sector provides an ideal opportunity to demonstrate how a systems approach can deliver a wide range of benefits under each of the Act's seven well-being goals and apply the sustainable development principle as set out in the Act. With the right policies in place, re-localising our food production and consumption and promoting shorter supply chains can generate multiple benefits for the local economy, environment, health and well-being.

An integrated approach to food could contribute to each of the seven goals of the Well-being of Future Generations Act:



Figure A: Outcomes of a Food System Fit for Future Generations



Note: This infographic was originally developed by FoodPolicy and Practice Wales. It has been slightly adapted for the purposes of this report.

Developing a food system strategy for Wales

To deliver a food system fit for future generations, with all the benefits this will bring, the Welsh government needs to develop a food system strategy for Wales. Drawing on recent international reports, scientific evidence and policy approaches in the UK and the EU, and current food policies and legislative requirements in Wales, we recommend three major components in developing this strategy:

1. Co-creating a new vision for Welsh food, based around 10 key interlinked themes

The 10 key interlinked themes

1. Agroecological farming
2. Agroecological farming skills
3. Horticulture promotion
4. Local food procurement
5. Sustainable food hubs
6. Food cooperatives
7. Digital markets
8. Sustainable dietary guidelines
9. Quality food standards
10. Promote Welsh food in a British Isles Context



In building the local supply of healthy, sustainable and accessible food, Wales's food and farming sector should regenerate its ecological foundation, restoring nature to provide the many functions and services that farmers and society rely on. We recommend that Wales makes this transformation to an agroecological farming region by 2030.

Agroecology: Agroecology applies ecological concepts and principles to food production practices, managing interactions between plants, animals, humans and the environment for food security and nutrition. For example, an agroecological approach to soil health would be one which focuses upon natural inputs and their retention. The diversity of practices within an agroecological system creates a more robust and resilient system that is less vulnerable to international market dynamics.

Farming using agroecological principles will require a comprehensive package of training and skills. Welsh government should support the setup of regional training centres to drive collaboration and knowledge exchange, drawing upon the wealth of knowledge of farmers, businesses, and further and higher educational institutions. Training and business advice, as well as widening access to land, are also needed to increase small-scale horticultural production in Wales.

Local and regional public procurement - for example in schools, hospitals and council offices - can help create markets for local food businesses. Public Service Board Well-being Plans should include public value criteria around environmental, welfare and nutritional standards in food production.

A new food vision for Wales should centre around re-localising the food system, restoring environmental, social and human capital to strengthen food security and capture more value locally. It should look at what we can sustainably produce in Wales, and tailor this to consumer demand and market opportunities. This vision needs to be co-produced between government, farmers, food businesses and other stakeholders including, importantly, the public through new participatory approaches at local, regional and national levels.



2. Infrastructures: rebuilding sustainable food provision

Food infrastructures need rebuilding. To support local supply chains and rebalance the distribution of power, infrastructure is needed in towns and the countryside to link food producers to consumers in more diverse ways. This means more sites for food markets, community retailers and food processors, investment in food cooperatives and the development of a network of food hubs that aggregate and distribute local food. Local authorities should be required to make plans for developing food hubs, which could facilitate local and regional provisioning and procurement for the public sector as well as private buyers.

Wales should embrace and develop digital food markets and supply chains that link consumers with producers and food hubs. Increasing citizen ownership and involvement in a more localised food system can improve community cohesion as well as help shape what is produced and how. These re-localised infrastructures will also allow retailers to stock more local food produced through agroecological based farming practices.

3. Delivery mechanisms

To realise the new food vision for Wales and build the necessary food infrastructure, an integrated set of policies and funding mechanisms need to be developed. Public Service Board Well-being Plans and Well-being Assessments, Natural Resources Wales's Area Statements and the school curriculum should be key vehicles to deliver sustainable food production and consumption.

A new Wales Food Commission should be established to oversee the delivery of the food system strategy, comprising the Future Generations Commissioner, Area Statement leads, education and public health boards, Welsh government leads on food policy (including agriculture, procurement, health and social care) and food practitioners (including community-based organisations and environmental NGOs). We also recommend creating a National Universal Food Framework to ensure all Welsh people have the right to access healthy food.



1. Introduction

This report explores the necessary ingredients needed to help shape the development of an integrated Welsh food system and provides a strategy and interlinked actions that would place food policy as a central public policy in Wales. It sets out the principles and key components that would make up an integrated food system and provides a framework to help start a discussion around what an integrated food system in Wales should look like. Crucially, this study sets out the opportunity we have to apply the Well-being of Future Generations (Wales) Act 2015 systemically in achieving an integrated food system in Wales and why now is a crucial time for achieving this. Given the context of the Act, which sets out a vision of well-being for current and future generations, Wales can be a leading player in the way forward for devolved UK countries.

The report highlights what an integrated food system should look like in accordance with the ways of working and well-being goals of the Act. The food sector provides an ideal opportunity to demonstrate how a systems approach can deliver a wide range of benefits under each of the Act's seven well-being goals and apply the sustainable development principle as set out in the Act.

Throughout the report it is recognised that much of the Welsh food economy is integrated into the wider UK food economy. Nevertheless, it also recognises that Wales holds devolved authority for developing its food and agricultural policies and has developed a unique set of statutory powers associated with the Well-being of Future Generations Act. As such, Wales has the opportunity to adopt a leading role in the UK in developing its food policies, within the wider UK context of Brexit and the severe challenges the UK food system faces. This paper outlines the key ways in which the capabilities and capacities to enact this can be achieved.

Next steps

This report proposes a radical reconfiguring and realignment of food policy in Wales. We hope it provides ideas for immediate action as well as further discussion and research. We are keen to engage with stakeholders to identify areas of common ground and explore differences to help create a food system in Wales fit for future generations.



2. Why take an integrated approach to the Wales Food System?

Since 2018, we have seen a range of high-level and international reports (e.g. EAT Lancet; IPES, RSA)^{xii} demonstrating a more urgent need for an integrated systems approach to food and food policy. This sees the important changes in the food system as central for delivering on a number of global challenges, among them how we address biodiversity loss and climate change, food insecurity and health, as well as reducing the inefficiencies associated with food waste and especially plastics. The realisation is that it is no longer sufficient to talk about a more sustainable food system; but rather there is a need for a radical transformation of the system so as to deliver sustainable and healthy food for all in the face of shrinking resources and a growing global population.

The food system is vital for future generations to better safeguard their health and livelihoods, and environmental well-being which supports this. Yet at the moment, the global food system also forms a threat to future generations through its dysfunctional production, distribution and consumption practices which endanger health, contribute to the nature and climate emergencies and food insecurity.

Ecosystem resilience and a strong, healthy environment underpins the entire food and drink sector and provides the fundamental building blocks for food production. Without functioning ecosystems and a biodiverse natural environment, our capacity to produce food is greatly reduced.

In looking at the current state of Wales' ecosystems, Wales' first State of Natural Resources Report^{xiii} concluded that none of Wales' ecosystems have all the attributes required for resilience. Wales' wildlife continues to decline according to the State of Nature 2019 report,^{xiv} with the latest findings showing that one in six species in Wales are at risk of extinction. Unsustainable agricultural management is the single largest driver of biodiversity decline, while agriculture accounts for 12% of Welsh greenhouse gas emissions.^{xv} Agricultural pollution is a contributor for why only 37% of all water bodies in Wales achieved good or better ecological status in 2015.^{xvi} Agricultural pollution includes nitrate, phosphate and pesticide runoff, and soil erosion resulting in the siltation of watercourses. In Wales, 89% of sensitive sites suffer from excess levels of nitrogen pollution which flows into waterways and is deposited into the air.^{xvii}

Our food consumption also has global impacts, with palm oil in packaged foods and soya grown to feed livestock driving deforestation^{xviii}. Climate and ecological emergencies have been declared by Welsh Government, re-enforcing the increase in public concerns and recognition of biological and ecological loss. **Food production needs to be core to addressing the climate and ecological emergencies.**

Our food system further erodes the health of all generations, as cheap and highly processed foods high in sugar, fat and salt are widely promoted and cheaply accessible. The incidence of obesity is increasing, with 60% of adults and 28% of 4-to 5-year olds in Wales obese.^{xix} 78% of adults aged 16-64 years, 77% of adults aged 65 years and over and 94% of children aged 11 to 18 years in Wales do not meet the "5-A-Day" recommendation

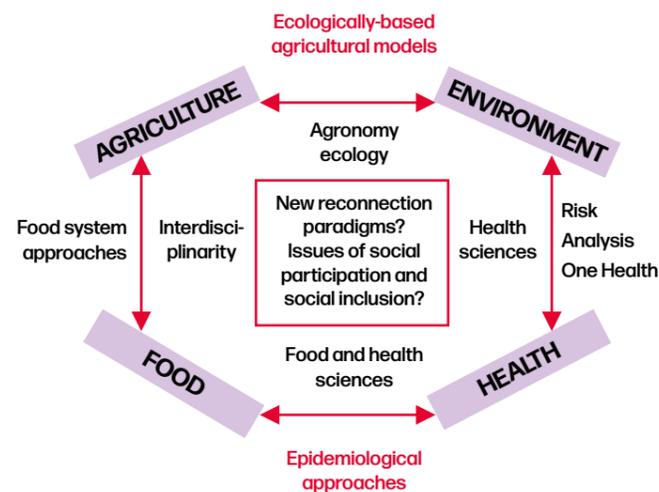
for fruit and vegetables. **Healthy eating behaviours are lacking among people in Wales - illnesses associated with obesity cost the Welsh NHS more than £73 million a year.**^{xx} The increasing health cost of diet-related chronic non-communicable diseases (NCDs) pose a threat to the future of the NHS.

Furthermore, wages have not kept pace with the increasing cost of living, creating food poverty and insecurity in an increasing percentage of households. In Wales, 14% of people reported in 2017 that they had experienced a lack of food without enough money to buy more. Emergency food supply parcels distributed to adults and children in Wales rose respectively from 9,626 and 5,070 in 2011/2012, to 60,387 and 34,803 in 2016/2017.^{xxi}

In addition, the food landscape has changed dramatically over the last 60 years; with supply chains from farm-to-fork growing longer and more complex and the distribution of power becoming more concentrated through vertical integration of agri-food business activities. Seed companies and procurement organisations for supermarkets exert a major influence on what happens in other parts of the food system. A disproportionate amount of economic value is captured by corporate food processors and retailers, which squeezes the margins of local producers, independent retailers and Welsh consumers alike.^{xxii} Corporate food processors and retailers need to play a key and proactive role with respect to achieving transformations towards health and sustainability. A systems approach to addressing the food system could include requirements that retailers incorporate the costs of environmentally damaging operations and measures to make the most of food produced in their business model. This can be achieved for example through internalizing the costs of plastic waste generated, eliminating food waste and using circular economic practices to reduce overall waste.

From a governance perspective, the growing food crisis has made clear that food system outcomes are affected by a complex range of determinants and that traditional governmental efforts to steer these determinants through monocentric command and control strategies get stranded in 'siloes' administrative systems, intractable controversies between opposing value systems, and power struggles between constellations of interests.^{xxiii}

Figure B: Food system Reconnections: After Lamine, 2019 ^{xxiv}



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The food system is referred to as a system because it is highly interconnected. Thinking systemically and at an interdisciplinary level can help ensure that challenges are tackled from multiple perspectives and in a holistic way (see figure B above). Many diseases and conditions have diet as a major risk factor, and while Public Health Wales and Welsh Government have focused strategy on improving diets in its Healthy Weight Healthy Wales Strategy,^{xxv} **these policies do not yet cross over to other policy sectors that influence food and drink businesses, marketing and advertising, food production, zoning restrictions or influence the cost of living so that people can afford healthy diets.**

Food also links to important biodiversity and climate change challenges. Wales' food system needs to sufficiently account for its direct and indirect impacts on the environment. This has not been factored in strongly enough in recent consultations on the food sector in Wales, particularly the integrated impact assessment attached to the 'Developing Wales' food and drink sector^{xxvi} consultation which does not cover a full assessment of biodiversity. **Such food plans should wholly apply the Environment Act, including part 1 (the sustainable management of natural resources) as Wales' resources should be managed in a more proactive, sustainable and joined-up way.** The 'Developing Wales' food and drink sector' consultation report addresses important themes of collaborative working across industry and promises important support for building skills within the sector that are vital for continuous development and prosperity of the food and drink industry. However, as an overarching food policy document, it takes too narrow an approach to the food system and misses an opportunity to more explicitly link up with other consultation reports.

The most recent Welsh Government 'Sustainable Farming and our Land'^{xxvii} consultation proposes a new land management system that uses tax payers' money to promote restorations of environments, soils and air quality and reward farmers for restoring and looking after nature for the benefit of all people in Wales. This is a big change in direction from past farming policies that have shaped the way we farm the land. The proposals set out are promising and indicate political will to address certain challenges in the agricultural sector. Again, this is just one part of the food system in Wales; **sectoral approaches to food in Wales misses opportunities to achieve co-benefits that can result from combining approaches to healthy diets and sustainable agricultural practices.**

The Well-being of Future Generations Act mandates alignment of policy across departments in support of its vision of well-being for current and future generations. A clearly articulated overarching food system vision needs similarly to connect with policy across departments that can support its delivery. The food system vision that we propose below supports Welsh Government's overarching vision for well-being within the food system. This vision is necessary not least because of the existence of the Act, which proposes seven key interconnected principles to which public policies should collaboratively contribute.

There appears to be a gap in current food strategy; what, how and why we produce food should be incorporated into a **food system strategy for Wales**. The 'Sustainable Farming and our Land' consultation report discusses the possibility to direct limited financing towards the food supply chain where this can be shown to directly benefit producers. Here is an opportunity to directly link to the 'Developing Wales' food and drink sector' consultation report and policies therein that also support development of the food supply chain. The 'Healthy weight Healthy Wales' strategy could link with 'Sustainable Farming and Our Land' and the educational curriculum by promoting horticultural production and consumption, thereby stimulating both demand and supply sides of the food system. Procurement strategies could also contribute to stimulating demand for sustainable horticultural and other food production in Wales. The 'Sustainable Farming and Our Land' consultation has already built in strategies to re-train land managers that may want to transfer to other land management systems, e.g. horticulture. Furthermore, the 'Sustainable Farming and Our Land' consultation also fails to connect up to the work done by Natural Resource Wales (NRW) to support Section 6 of the Environment Act on maintaining and improving ecosystem resilience. NRW has developed a series of attributes by which to achieve this: DECCA (Diversity, Extent, Condition, Connectivity and Adaptability). However, this is never mentioned with respect to farm managers taking actions to deliver ecosystem services, which represents another missed opportunity.

There are a number of Welsh public bodies that have the potential to link up environmental sustainability and nutrition objectives. For example, research indicates that food production systems that meet a greater proportion of nutritional needs are also lower in environmental impacts.^{xxviii} On the consumption side, Food Sense Wales runs a number of programmes, such as Peas Please (see case study 1 below), to promote increasing vegetable consumption.

Case Study 1:

Peas Please - Food Sense Wales

Peas Please is a nationwide initiative driving systemic change in the food system to make it easier for all British citizens, particularly those on a low income, to eat more vegetables. Low consumption of vegetables is associated with 20,000 premature deaths each year and increasing the amount of vegetables that we eat can play a key role in the transition to healthy and sustainable diets.

Peas Please is on track to secure 100 pledges of action from businesses and Government operating along the supply chain, as well as commitments from city partnerships during 2020. The first monitoring report demonstrates that 4.8 million additional portions have already been consumed as a result of Peas Please with the second report (due to be launched at the 2020 Veg Summit in March) showing this figure significantly increased. Peas Please has created an incredible network of actors at the national and subnational level who are supporting the initiative. Additionally, Peas Please has initiated and incubated the Veg Power fund^{xxxx}, which has just executed a £5 million vegetable advertising campaign in partnership with ITV and aimed at school children. This campaign has reached 38 million people, with 44% of the viewers children. Over two-thirds of children (69%) said they like the ad; 57% said it made vegetables more fun and 46% said they recently tried new vegetables as a result. There was a 2.3% positive impact on vegetables sales during the campaigns.

Together Peas Please and Veg Power have the potential to drive an increase in vegetables consumption by working collaboratively with stakeholders across the whole food system to support a transition to healthy and sustainable diets.

The Public Health Boards run a number of programmes to address gaps in nutritional and cooking skills in the adult population. The ongoing redesign of the Wales School Curriculum would benefit from an overarching food system policy steer with respect to incorporating nutrition and cooking skills for 3- to 16-year olds. The current section of the education curriculum on 'Health and Well-being' represents an opportunity for integrating these themes, but this will come down to individual schools. This also illustrates the need to integrate food policy not just horizontally, but vertically from local, regional to national scales. Owing to the sectoral approach to food, there are many opportunities for synergies that are being missed. A 'joined-up' food policy creates the framework, mandate and implementation plan for solving these and other problems. We particularly need to more clearly align food production and consumption in Wales.

However, creating an integrated policy approach to food systems is admittedly challenging. The intersections between policy systems are historically divided intellectually and departmentally. As a result, there is no institutional support for a food-focused approach and the instruments of multi-departmental policy making are in their infancy; there is no department of food. Whilst the Well-being of Future Generations Act mandates an integrated approach to working, the institutional structures have not changed to match or support this mandate,^{xxx} and the legacy of historical approaches creates a cultural barrier to overcome. Supporting new approaches means extensively confronting many existing and entrenched policy traditions and bureaucratic structures.

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Taking a food systems approach would thus mean understanding food as more than a marketable commodity, which creates problems for certain departments. **Government has a responsibility to the public to ensure basic rights to food and food security.** In specific circumstances, especially where private markets are clearly failing to deliver sustainable forms of food security, food (and/or the capacity to produce food) needs to be delivered through both public and private means. As we will explain below, for example, we can argue that from a food policy point of view that policy interventions are necessary in food markets in at least two important ways: (i) in defining the *ways and practices* in which food is produced (see section 4.2 below), for instance in restricting and banning pesticide use and certain types of slurry disposal); and (ii) in developing high public standards of food processing and labelling, as currently authorised by the Food Standards Agency.

Food policy needs development as a central part of public policy because a central guiding principle is that it is government's responsibility to ensure minimum standards and rights to high quality and nutritional foods for all. It would also challenge many of the central tenets of current agricultural and economic development, and the healthcare system that concentrates on cures rather than prevention. This contrasts with the Well-being of Future Generations Act's mandate for preventative ways of working.

Candel and Pereira (2017) identify five particularly demanding areas of concern for integrating approaches to food system policy: (i) constructing a resonating policy frame (**involvement**), (ii) formulating policy goals that take a **preventative** approach, (iii) involving relevant sectors and levels (**collaboration**), (iv) the question of what constitutes optimal policy **integration**, and (v) designing a consistent mix of policy instruments.^{xxxx} We highlight that although taking a food system approach is challenging, the Act mandates the five ways of working, four of which we highlight in bold above: long-term thinking, involvement, prevention, collaboration and integration.

Developing a systems approach to food policy achieves the final way of working: **long-term thinking**, because the objective is to address the multiple threats that an unsustainable food system poses to public and environmental health both now and in the future. A food systems approach provides an ideal opportunity to integrate sectors and demonstrate a system that can deliver a wide range of benefits under each of the Well-being of Future Generations Act's seven well-being goals, and apply the sustainable development principle when thinking of the long term, prevention, integration, collaboration and involvement as set out in the Act. It was heartening to see Welsh Government apply the Well-being of Future Generations Act framework to the recent 'Developing Wales' food and drink sector' consultation. However, key aspects of the well-being goals were misinterpreted or only superficially addressed in the consultation. Furthermore, **this was about applying the Act to the Food and Drinks industry and the manufacturing and processing sectors that sit within this, but the Act should be applied to the wider food system.**

It is time for an explicit food system strategy for Wales that takes into account the diversity of values in relation to food, the relationships between production and consumption, and the changing power relations in the food system. We need better and more diverse links between food production and consumption by catering for the market at the same time as catering for improved healthy and sustainable diets. Whilst accepting that there is not a *priori* necessary direct linkage between increases in re-localisation of food production and its sustainability, we can argue that with the right policies in place, re-localising our food production and consumption and promoting shorter supply chains can generate multiple benefits for the local economy, environment, health and well-being. **Such an integrated policy approach would be a mechanism to build resilience back into Wales' Food system.**



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3. Policy Context

3.1 An integrated approach: The Well-being of Future Generations Act, the seven well-being goals and the five ways of working

An integrated food system approach is not a new idea for Welsh Government; The National Assembly for Wales Climate Change, Environment and Rural Affairs Committee launched a report in May 2018 'Rethinking food in Wales: Public procurement of food'^{xxxii} and Chapter 1 considered the strategic direction of food policy and asks whether an overarching food strategy is desirable and necessary. Their first conclusion states: "There is currently a need for a strategic vision for the Welsh food sector which makes connections between different policy areas, such as health, wellbeing and sustainability, alongside economic growth."

Over the past decade, Welsh Government has tried several times to address deficiencies in its food system. Most notably 'Food From Wales: Food For Wales'^{xxxiii} was an overarching document published in 2010. It was never fully implemented and placed in the background by successive Ministers in favour of a more specific Action Plan that focused on Wales' food industry sector and set up the Food Industry Board. This has been successful in increasing gross value added and employment through

the food manufacturing system, but it would be unfair to view it as a comprehensive and holistic approach, or indeed as the **food system strategy for Wales** earlier envisaged by *Food From Wales: Food For Wales*. The Assembly Committees and the Public Policy Institute for Wales 2016 'Food Policy as Public Policy' report^{xxxiv} both highlight the need for a more integrated and holistic approach to food policy. Again, these have not been adopted, and Ministers have responded to these calls by signalling the primacy of the 'Towards Sustainable Growth - an Action Plan for the Food and Drink Industry 2014-2020'^{xxxv} (referred to as the Food Action Plan; and its current review with the 'Developing Wales' food and drink sector'^{xxxvi} consultation), as the main food policy vehicle (see Minister's August 2018 response to Environment Assembly Committee on their report on Food Procurement).^{xxxvii}

3.2 The need

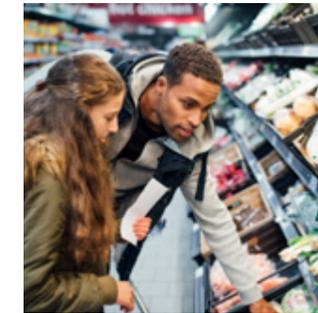
So, the questions for policy makers now become more challenging and urgent, and they specifically include:

- (i) How do we develop integrated strategies and actions which will shift the food system onto a more transformative pathway that can tackle poverty and generate multiple benefits for the local economy, environment, health and well-being?
- (ii) How can consumers, processors, retailers and producers be encouraged to make these shifts?
- (iii) How can a clearer and collective vision of a future Wales food system be built, articulated and communicated both to all stakeholders and the public, such that it becomes a major dimension of Welsh Public policy?

Whilst the current Food Action Plan is one part of this, it does not provide a comprehensive Welsh food system strategy for the present and future generations. As a result, it does not meet the full demands of the Act's well-being goals and ways of working. As noted above in section two, the current Food Action Plan needs to be integrated and embedded into a wider range of associated policy areas (including policies covered in the 'Sustainable Farming and Our Land' consultation report and 'Healthy Weight: Healthy Wales Strategy Plan') to build a real and comprehensive national food system policy for Wales and align with the Act, and more broadly the UN Sustainable Development Goals. As stated above, Wales needs a systems approach to the food system that better connects food production, manufacturing and processing, retail and consumption. A systems approach is an opportunity to strengthen the integration of social, economic, cultural and environmental considerations by considering them together across departments, rather than one department focusing, for example, on environmental considerations with less attention or understanding given to social or economic elements.

Integrating the Food Action Plan into a comprehensive approach to food system policy is made more complicated by the high level of integration of the Welsh food system with the UK food system, and the

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current uncertainties of potential disruptions to markets and regulations associated with Brexit. As a result, **Welsh food policies need to clearly indicate what Welsh Government can and cannot do with respect to food policy**, and how this can dovetail with a wider UK policy. **Any Wales food policy needs to recognise that many of its conventional supply chains are increasingly tied to UK processing and retailing hubs; and that Welsh consumers are hugely reliant upon UK and EU rather than just Welsh food providers.** This process is exacerbated by the concentration of larger processing facilities in England and the loss of smaller more local facilities in Wales, such as abattoirs and mills. Similarly, much of Welsh food production goes into UK and EU supply chains.^{xxxviii} Hence when we develop ambitious plans for Welsh food, we need to pay particular attention to collaborating and developing partnerships across the devolved territories, and indeed understanding the levels of import and export from Ireland. This should not reduce our energies and ambitions in developing a more integrated and visionary approach in Wales. Indeed, it makes the need to do this and to build a more resilient food system as part of wider systems all the more urgent and creates an opportunity for Wales to be a leader across the devolved countries.

A strategic overarching food system strategy that spans multiple Welsh Government departments would enable Welsh Government to fulfil its obligations under the Act by directly addressing the seven well-being goals. If Wales had a **just and sustainable food system fit for future generations**, this is what we believe it could look like:

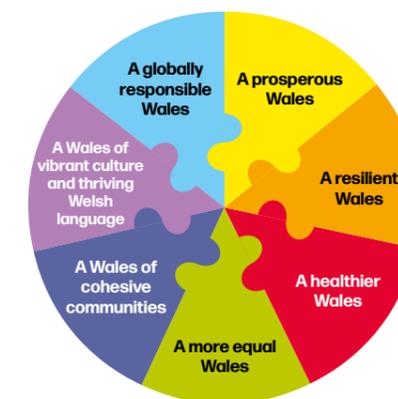
Figure C: Outcomes of a Food System Fit for Future Generations

- Wales celebrates and builds upon our Fairtrade Nation Status
- Food supply chains in Wales are deforestation-free

- Food is used to celebrate our heritage and Welsh language
- People come to Wales to experience our food, drink and hospitality
- Food is a fundamental part of the 'Foundational Economy'

- Food and farming supports rural communities to thrive
- Food is used as a 'convener' to bring people together
- Civil society organisations, food hubs and cooperative bodies promote local food initiatives

- Everyone has access to healthy, affordable food
- Co-productive approaches shape food provision in Wales



- Wales' natural resources are managed sustainably with healthy ecosystems underpinning food production
- More healthy and sustainable Welsh food is supplied directly to our Welsh public sector and Welsh households
- The real living wage underpins the Welsh supply chain
- Wales' food sector is a significant contributor to Wales' net zero climate change target, with significant carbon stored on Welsh land

- Wales' nature based/agroecological farming systems help restore biodiversity, soil health, help prevent flooding and keep Wales' air and water clean

- Everyone eats more fruit and veg and eats less processed food
- Everyone learns about food and how to grow and prepare nutritious meals



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A Prosperous Wales.

Wales' natural resources are managed sustainably with healthy ecosystems underpinning food production. Wales' food and farming sectors are a significant contributor to addressing the climate emergency and Wales' net zero climate change target. Public procurement offers the opportunity to shorten supply chains, set public value criteria around environmental and welfare standards in food production, and stimulate demand for healthier and more sustainable Welsh food to be procured/supplied to the public sector and Welsh households. This creates opportunities for thriving local economies which are supported through various training routes to ensure that Welsh food system actors are able to rise to the challenge and seize business opportunities that support regional economies. The real living wage underpins the Welsh supply chain.

A Resilient Wales.

Wales' agroecological farming systems help to restore biodiversity and soil health, prevent flooding and keep Wales' air and water clean. Agroecological farming systems restore resilience within production systems by introducing diversity, circularity and complexity and eliminating the use of non-renewable and energy-intensive inputs. Wales' food system uses a combination of agri-environment payments and demand-side drivers for healthy and sustainable foods. Going beyond payments for environmental services currently recognized in 'Sustainable Farming and Our Land', payments would also be for actions that support the achievement of NRW's DECCA approach to improving ecosystem resilience. Agri-environment payments would recognize contributions to well-being and education goals which improve the social resilience of the system by building relationships back into the food system.

A Healthier Wales.

Everyone eats more fruit and veg and less ultra-processed food. Health strategies are integrated into a food system strategy for Wales to ensure that everyone has access to healthy, affordable food, and that everyone can learn about food, how to grow it, and to prepare nutritious meals. Positive norms to healthy foods are built into the education system and there is a greater awareness and respect for the food that people consume as relationships between people and the source of their food is better understood. Small-scale horticultural production in Wales is scaled up through widening access to land and training of new entrants and business advice. Connecting with the 'Healthy Weight Healthy Wales' obesity strategy, school food standards reflect healthy eating principles and sustainable food production capability in Wales is stimulated to ensure Welsh food is supplied by Welsh producers to children in Wales giving environmental, health, economic and social benefits.

A More Equal Wales.

A food system strategy for Wales supports a framework that ensures everyone has access to healthy, affordable food. Co-productive approaches shape food provision in Wales. The development of food citizens is encouraged, where people actively engage in their community food systems to drive culturally appropriate regional and national food systems. Culturally appropriate practices and food vary across regions and even within cities, which further points to the need for a co-productive approach addressed through citizen assemblies and other forms of citizen engagement.

A Wales of Cohesive Communities.

The food and farming sectors support rural communities to thrive, ensuring livelihoods for farming communities that deliver ecological and social well-being goals. Food is used as a "convener" to bring people together and sustainable food provision becomes a key element in community regeneration strategies in both urban and rural communities. Civil society organisations, food hubs and cooperative bodies are encouraged and supported to promote local food initiatives as part of community development initiatives. Support is directed towards setting up regional training centres for sustainable food production that draw upon and bring together the wealth of knowledge of farmers and business owners through collaboration.

A Wales of Vibrant Culture & Welsh Language.

Food is used to celebrate our heritage and Welsh language. People come to Wales to experience our food, drink and hospitality. Welsh cuisine and food culture is encouraged in the food service and hospitality sectors. Food initiatives are inserted as part of Welsh language training and school curricula. Food is recognised as a fundamental part of the 'Foundational Economy', enabling local communities to regenerate and become more socially and culturally vibrant.

A Globally Responsible Wales.

Food supply chains are globally responsible as they have eliminated the import of commodities that are linked to environmental degradation abroad e.g. supply chains are free from soy feed and palm oil linked to deforestation. As part of this, livestock feed in Wales and the rest of the UK does not rely on resources from overseas. This is a key principle as part of business support from Welsh Government and a key principle in public sector procurement. Wales strengthens and builds on becoming the first country in the world to achieve Fair Trade Nation status as a way of demonstrating support for global producers.

4. The Food System Opportunity

4.1 Overview of the opportunity

The process of developing a food system strategy for Wales needs to focus upon three clearly identified policy spheres: (i) Co-creating a new collective and transformative vision for Welsh food that has the capacity to meet today's urgent needs outlined above; (ii) concerted actions in building infrastructure that supports integrated policy approaches; and (iii) enacting a range of interrelated delivery mechanisms at multiple spatial and organisational scales.

Given these new and demanding challenges, a new vision for Welsh food is needed; and this once agreed, needs to be owned and embedded in a comprehensive food infrastructure plan which tackles and progresses all seven principles of the Act and involves investments and interventions in social, economic and environmental infrastructures. **This will require a whole-government approach** and as part of this, changes in governance infrastructures as well, as we have recently advocated in a series of briefing papers;^{xxxx} and is supported by influential reports like the recent Royal Society of Arts (RSA) 2019 report. The RSA report advocates actions to be taken within our food system over the next ten years to recover and regenerate nature, and to restore health and well-being to both people and planet. Brexit can also be seen as an opportunity to recast food governance. We advocate establishing a **new Wales Food Commission** to oversee targets and performance of a food system strategy for Wales and to bring together existing siloed policy areas under one governance framework. The Commission would have a broader remit than the Food and Drink Wales Industry Board, which only covers the industry part of the food sector¹. A **food system strategy for Wales** will also set up a wider range of delivery mechanisms beyond those currently set out in the Food Action Plan.

4.2 A Transformative Vision

It is instructive to re-visit the collective vision proposed in the 'Food For Wales; Food from Wales (2010-2020) policy.'ⁱⁱ Many of the objectives set out in that strategy document remain relevant and even more important given the delays in adequately addressing them in the interim; for example, improved reputation and value, higher food quality, increased diversity; a shared goal across all main stakeholders; more integration; and embedding food into long-term approaches to economic resilience and security. In fact, many of these objectives align with the five ways of working highlighted above.

Much of this vision has not been realised because Welsh Government has not fully promoted the policy or created an appropriate delivery and implementation plan. As a result, policy areas have remained fragmented and continue to pursue sectoral approaches to aspects of the food system: environment, health and the economy are all treated as separate aspects of the food system, which perpetuates approaches that are less efficient and risk contradicting each other, rather than identifying areas of synergies and efficiencies. Policy segmentation has led to a food policy largely dictated by economic growth priorities. This has focused on industry drivers and partners and risks isolating food production from consumption drivers

and risks continuing the social inequities across the food system that lead to food insecurity. A decade of UK Government economic austerity has exacerbated food insecurity for low income groups and significantly reduced local authorities' abilities to invest in the processes identified in the Food for Wales; Food from Wales strategy, such as food procurement and food security programmes. All of the evidence shows that food insecurities for the Welsh population have increased over the past decade. **Some may be critical of vision statements, but we wish to argue that this is now an urgent requirement if we are to re-set and develop a sustainable, restorative and transformational agenda for Welsh food.**

A new revised and ambitious vision is needed which can attract and enrol policy leaders, civil society and the business community through practices of co-production and joint working. In light of the five ways of working, in particular, involvement, integration and collaboration, there is a legal mandate to engage with as wide a range of actors within the food system as possible to build this vision. As everyone is a consumer, this means engaging with the wider public in the process, for example through citizen assemblies, and ensuring that the resulting vision reflects the identified priorities and builds upon their lived experiences. In this way we also support the development of food citizens and the need to build stronger and more empowered communities.

It is important that this vision is then communicated inside and outside of Wales, and especially to the changing nature and role of the Westminster government. While this strategy should be co-created, there are a number of broad themes relevant to promoting ecological, social and economic sustainability and resilience. We need to better link food production and consumption strategies in Wales, by catering for the market and catering for healthy and sustainable diets. We should be looking at what we can sustainably produce and sell in Wales, tailoring this to market demands and consumer trends, and identifying domestic market opportunities for these products in the first instance, and secondly export markets.

In addition to a Wales Food Commission, a national framework for ensuring integration and achieving food security across Welsh society is critical for transformation. We suggest that these structural changes can be created in the form of a **National Universal Food Framework**. In the UK, we have universal health care because healthcare is viewed as a universal right that everyone should be able to access. The UK has ratified, and is therefore legally bound by, the ICESCR, including the human right to adequate food.ⁱⁱⁱ Therefore, the Government is legally required under international human rights law to secure the human right to adequate food for everyone in the UK. Similarly, the UN Special Rapporteur on the Right to Foodⁱⁱⁱⁱ defines the right to food as "the right to have regular, permanent and free access, either directly or by means of financial purchases, to quantitatively and qualitatively adequate and sufficient food corresponding to the cultural traditions of the people to which the consumer belongs, and which ensures a physical and mental, individual and collective, fulfilling and dignified life free of fear."^{xiv}

¹ We acknowledge that there is also now an Implementation Board for the 'Healthy Weight Healthy Wales' Obesity Strategy and also a Food Standards Agency Welsh Food Advisory committee

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In Wales in 2018, 20% of people worry about running out of food and 26% of 16- to-34-year olds surveyed ran out of food in the previous year.^{xv} Further, the Food Foundation has shown that 160,000 children in Wales are living in households for whom a healthy diet, as defined by the Eatwell Guide, is increasingly unaffordable.^{xvi} We know that food and diet are tightly coupled to health and well-being. A National Universal Food Framework would ensure universal access to a healthy diet.

A National Universal Food Framework would engage with food producers, food hubs, schools, local authorities and the NHS to re-connect people to the sources of food, to nature and to each other. Building relationships back into the food system can foster positive mental and physical health outcomes^{xvii} and promote the following ways of working of the Act: prevention, collaboration and involvement. A National Universal Food Framework can create the mechanisms to empower communities to engage with their food system so as to design and build through bottom-up participation and with facilitation support, community-based universal food programmes that utilize a capabilities approach and meet the unique needs of each community.^{xviii}

In the case of food produced locally, school children and community members could be connected with local farms and community gardens, where they would spend time with other individuals, on activities on the farm/garden to grow food. It could also incorporate community kitchens, which would be stocked with basic store cupboard goods, where people could go to cook food in a social and supportive environment. This would grow the scheme supported by the Soil Association in the Food for Life program^{xix} to award funding to groups for multigenerational social gatherings based around food. This is just to illustrate the ways in which Welsh Government could create a National Universal Food Framework and benefit from existing programmes at community, regional and national scales.

A National Universal Food Framework could coordinate and use social and nature prescribing to have individuals spend time on farms/gardens, growing food. The National Universal Food Framework would incorporate education and school curriculum through partnering farmers and community gardens with schools to incorporate regular farm visits into health and well-being learning objectives under the new school curriculum. Adult learning programs for nutrition and cooking skills would incorporate learning about how food grows (which encourages greater appreciation of the food). It would establish lifelong education that reconnects people to the source of their food. Agri-environment payments for the provision

of public goods would reward farmers for their participation in education and social prescribing programmes. The co-design and co-production of a National Universal Food Framework could be supported by the Area Statement process which needs to address how food is produced and how this can be harnessed in order to meet regional development priorities and ecosystem resilience and biodiversity legislative commitments; the ways of working in order to achieve Area Statements that meet legislative requirements would enable a wider approach to the food system suggested here.¹

A National Universal Food Framework would grow a connection between individuals and the food they eat, it would create health benefits in terms of increasing physical activities, and it would improve mental health due to both outdoor physical activity and socialising with other people also on the farm/garden. It would do so by integrating education, agriculture, food, procurement and health strategies and action plans and would drive a food system strategy for Wales.

A National Universal Food Framework would draw upon already existing strategies across the above-mentioned sectors, but create a structure for unifying these strategies under the Welsh Government's defined strategy for well-being. The new structure presents opportunities for cost savings by creating synergies across the food system to achieve the transformation needed for a sustainable and just food system. A National Universal Food Framework would also improve costs through improved health outcomes that reduce the burden of non-communicable and dietary related diseases, and improve education outcomes to achieve a more prosperous Wales. While such an approach seems radical, and indeed Wales would be the first national government to initiate a universal rights approach to food, a recent report released by the RSA Food, Farming and Countryside Commission¹ advocates similar approaches, for example through their proposed Beetroot Bonds (pg. 26). We propose that in order to implement such an approach successfully, it would require a broader systemic infrastructure of support such as a National Universal Food Framework could offer.

A National Universal Food Framework disrupts the current system and proposes taking a food system approach to policy by integrating and aligning a National Universal Food Framework to other national service systems such as the NHS, the Education System and all national and local government procurement processes. The National Universal Food Framework, embedded within these institutions and mechanisms, would provide: a) important opportunities for norm setting; b) advocacy and accountability; and c) behavioural change across local, regional and national levels. Rather than precluding existing community interventions that operate in a piecemeal fashion, it would provide a national framework under which interventions may operate in a systematic manner to drive behaviour change at all system levels to improve health outcomes for all, help address the climate and ecological crises, increase resilience and ensure sustainability. Such a system would also align with international guidelines, such as the UN Decade on Nutrition and UN Right to Food. Moreover, a National Universal Food Framework would utilise government buying power to drive systemic changes in business, the third sector and policy making to ensure that all sectors and members of society benefit. Building on the above, we believe that the following themes should inform the process of building the vision for a food system strategy for Wales. Co-creating this new vision for Welsh food should be based around 10 key interlinked themes. The themes are interrelated, supporting each other in achieving synergy across the system:



Building local supply of healthy, sustainable and accessible food:

- (i) **Agroecological farming:** Given the climate and biodiversity crises, Wales' agricultural sector has to transform and regenerate its ecological foundation. We recommend that Wales makes a transformation to an agroecological farming region by 2030. Agroecology applies ecological concepts and principles to food production practices, managing interactions between plants, animals, humans and the environment for food security and nutrition. Agroecology integrates circular and regenerative approaches to the natural resources in the system, maintaining and recycling nutrients in the system. They rely on the diversity of biological organisms, from the plants grown and harvested, to the insects both in the ground and above-ground that facilitate an environment conducive to growing crops. Agroecological approaches focus on soil health and preservation and natural input (sun radiation, air, water and nutrients) optimisation. The diversity of practices within an agroecological system creates a robust and resilient system that is less vulnerable to international market dynamics of input (synthetic fertilizers, pesticides and seeds) price and availability. The use of synthetic fertilizers not only contributes to climate change, but they disrupt the natural balances in soil biotic communities, reducing natural soil fertility functions. Pesticides further disrupt the natural balance by killing broad populations of insects and other animals that often provide beneficial services for the farming system. Agroecological approaches emphasize ecological knowledge and skills to respond to the dynamics of the natural system and understand best practices for achieving ecological balance, which creates high functioning and productive systems. Agroecology relies on on-farm natural resources and in-depth knowledge of the farming ecosystem, with a strong focus on participatory action research to achieve context specific and socially accepted innovations within farming systems. It requires a multi-stakeholder approach bringing together agriculture, environment and social perspectives.ⁱⁱⁱ

In the context of developing a food system strategy for Wales and the opportunities that Brexit now brings in developing bespoke UK and Welsh agricultural and food policies, it is proposed that these agroecological principles become central to food policy in Wales, and indeed that Wales, over a ten-year period develops its own contextually specific form of agroecological agriculture. New and comprehensive European evidence suggests that transitions to agroecological practices not only provide additional income and value-added benefits to existing farm practices, they hold higher levels of local employment as well as ecological restorative potential.ⁱⁱⁱ Case study 2 below demonstrates an example of regenerative farming in practice in Wales.

Case Study 2:

Slade Farm - a Mixed Organic Farm in South Wales

For much of the last 50 years we've been moving towards easily consumable food with permanent availability. For farming that has meant predictability of supply leading to specialisation, intensification and consolidation. This is at odds with the natural system, which depends on diversity, and it also creates an imbalance of power between supply chain producers and buyers.

A resilient Wales

Farming practices can be used to ensure increased biodiversity as well as the production of nutritious food. Slade Farm uses cyclical nutrition and fertility building within the farm to provide a definitively sustainable system within no external inputs. The system is supported via management practices such as areas of permanent pasture, spring sown cereals, and hay meadow maintenance. Taken together these practices ensure the maintenance and growth of biodiversity above and below ground.

A more cohesive Wales

Using farms as a 'place' provides the opportunity to engage communities in food production and nature. Slade Farm has regular public events to showcase food production and runs a small Community Supported Agriculture scheme. This brings the local community together and creates both bonding and bridging social capital as well as reconnecting people to the land.

A healthier Wales

An overwhelming driver of poor outcomes in health and nutrition is the level of processed foods consumed. Slade Farm connects people to primary products through local supply of meat and vegetables. This creates the micro opportunities within households to make different choices. The shape of our food system influences our behavioural patterns; changing its shape can have positive consequences for health and nutrition.

Wales has an opportunity to enshrine the benefits of regenerative agriculture within its food system. It is clear that when such practices are in place they provide enormous public and common goods that contribute directly to a better Wales.

- (ii) **Agroecological farming skills:** Supporting agroecological approaches to food production requires a more connected and comprehensive training and skills landscape for sustainable food production and the wider food system that links food and farming organisations, urban and rural production and the network of further and higher educational institutions. The 'Sustainable Farming and Our Land' consultation, the 'Developing Wales' food and drink sector' consultation and the 'Healthy Weight Healthy Wales' strategy all incorporate support and action points to address the skills gap at various points in the food system. An overall vision could also incorporate school curriculum in supporting these objectives. Food policy in Wales has already taken innovative steps to support networking and connecting actors in the food system by establishing themed clusters to support skills development within the food sector. Continued support can be directed at setting up regional training centres for sustainable food production that draws upon and brings together the wealth of knowledge of farmers and business owners through collaboration. These centres could support new co-operatives and co-operative ways of working as well as enabling accreditation and/or financial support for farmers wanting to deliver traineeships and training programmes.^{iv} Case study 3 illustrates ways in which informal traineeships already occur and could be increased in numbers with financial incentives.

Case Study 3:

Cae Tan^{iv}

Community supported agriculture (CSA) is an approach to farming where the responsibilities, risks and rewards are shared between growers and members. Cae Tan is a grower-led CSA meaning decisions are guided by the growers and supported by the members of the CSA who pay for a share of the crop in the form of a weekly box of vegetables. There are currently 120 members of the Cae Tan CSA who pick up their weekly vegetable box from a local hub.

Cae Tan aims to help establish new growers and build local produce availability. Currently, the head grower and assistant grower manage farm operations, supported by an apprentice and a number of volunteers. Through the CSA model, Cae Tan are creating a range of opportunities for new entrant growers including training and employment. Over the last four years, two apprentices have moved on to secure employment in horticulture: one has become assistant grower at Cae Tan and one has set up a salad growing social enterprise. A third apprentice is working towards setting up a sister CSA in the Swansea area.

Alongside their apprenticeship scheme, Cae Tan runs a Sustainable Schools Programme where primary school pupils from five schools in the Swansea area are learning about sustainable farming.

Long-term core funding, similar to that provided to farmers for environmental and social benefits, could be provided by Welsh Government for training and support for new and existing sustainable food co-operatives, community food hubs and community food centres. Advice and further education on both co-operative ways of working and co-operative legal structure tailored to the food sector would be available to businesses regardless of size or turnover, embedding co-operative education within Welsh educational policy and business provision services. Training and skills would be available to connect to nutrition and cooking throughout the education system (from early years to university and adult education). Programmes such as the Nutrition Skills for Life^{vi} and the School Holiday enrichment^{vii} seek to achieve these objectives in certain communities. Schools should be linked to farms and urban / community gardens, where hands-on learning about the source of food creates a foundation for food skills for future generations. This is already being achieved by the Soil Association's Food for Life programme^{viii}, Tasty Careers^{ix} and the Welsh Government's Skill Pledge^x, creating a model for Welsh Government to scale across society.

Further training can be achieved by creating centres for training and R&D extending and developing the existing food technology centres networks so as to meet the Welsh Government Food Action Plan target of attracting 8000 new entrants into food manufacturing by 2025. This number needs to increase when we consider the food hospitality sector, farming and especially horticulture, and product marketing. The centres would be demonstration hubs of best practice.

- (iii) **Horticulture promotion:** Scale out small-scale horticultural production in Wales through widening access to land and training of new entrants and business advice, especially for producers in the meat and dairy sectors wishing to diversify. Horticulture in Wales has been in long term decline with fewer than 3,000 hectares now under cultivation for potatoes, field vegetables, small fruit and commercial orchards, compared with double that amount forty years ago.^{xi} Innovative schemes that are targeted at growing the market opportunities for these products, most easily through procurement policies, coupled with greater knowledge exchange, could help to incentivise more widespread production in Wales. In order for Wales to produce the amount of fruit and vegetables required to meet nutritional recommendations of five servings a day, 2% of Welsh land area would be required for production.^{xii} Aiming for 2% of land area to be dedicated to horticultural production could form a policy tool within both health and land management strategies in Welsh Government.

According to research into the barriers to increasing horticulture production in Wales: *'Perceived barriers...were the challenge of 'squaring the circle' and how to make a living from selling fruit and veg at the same time as producing an affordable product; lack of fairness in the system; training and labour issues; lack of research and development; the constraints of seasonality versus desire for exotic fruit and veg and the culture of fruit and veg consumption; marketing of fruit and veg; and the systemic 'chicken and egg' challenge in terms of whether to increase consumption or production first. Overlying all these barriers is a divergence within the sector and general lack of policy direction and vision which in itself has been a barrier to development.'*^{xiii}

The Pathways to Farming^{xiv} project (see case study 4 below) in North Powys is an example of a project working to increase horticulture production in Wales and create new markets for local produce.

Case Study 4:

Pathways to Farming

Pathways to Farming is a Mach Maethlon project working on increasing the number of horticultural food producers in North Powys and creating new markets for local produce. The project is working with 12 trainees in the Machynlleth and Newtown area, teaching them the horticultural skills needed for commercial food production and mentoring them to grow on small scale 'microfarm' plots. The idea is that these trainees will move on to scale up in the future using the business plans they are writing as part of their training.

The project is working to develop new markets and new selling models that will enable more locally grown food to be sold. The project will meet its aims by running a five-step programme:

1. **EVENTS:** to promote local food and engage more people in growing and eating it.
2. **VOLUNTEERING:** offering volunteer opportunities to people interested in gaining experience in sustainable food production.
3. **MICROFARMS:** developing new 'microfarm' sites on which new entrants to horticultural food production can test their ideas and gain experience.
4. **VOCATIONAL TRAINING:** developing a new accredited training programme in sustainable horticultural food production.
5. **NEW MARKETS:** creating new markets for locally produced food, including food hubs and new cooperative selling models.

The project has developed exciting partnerships. In Machynlleth the Centre for Alternative Technology has offered land, project support and shared vision, while in Newtown the project has partnered with the community growing organisation Cultivate to share their community garden and their vision for a more resilient food system.

Building the local market for healthy, sustainable and accessible food:

- (iv) **Local food procurement:** Make local and regional public procurement of foods a key aspect of Public Service Board well-being plans, link this up to a network of sustainable food hubs, and regularly monitor this through the Public Service Boards. As an example and as stated above, one of the barriers to increasing horticulture production is the need to stimulate demand for fruit and vegetables grown. Procurement has the power to create the demand for greater horticulture and arable crop production in Wales for Welsh consumption. The increase in demand can support policies to encourage producers to transition towards agroecological production practices and more diverse production systems. The Carmarthenshire pilot Foundational Economy project^{lxv} on local and regional food procurement should be extended to all Welsh Local Authorities, recognising the differences between urban and rural areas.
- (v) **Sustainable food hubs:** Invest in developing a network of sustainable food hubs (businesses that aggregate and distribute local food) in rural Wales and link farming support to making transitions and convergence to agroecological practices. According to a 2018 survey of UK food hubs, they often cooperate within an explicit ethical framework and fill gaps in local food infrastructure, help consumers find locally sourced produce, support new forms of food retail, incubate food enterprises, and / or create a space for community education and action.^{lxvi} Food hubs have been estimated to have a gross output multiplier of 1.75 and an employment multiplier of 2.14.^{lxvii} An integrated policy environment within Wales needs to recognise the vital link between sustainable and just food, vibrant culture, and the health and well-being of future generations. This requires a Wales-wide action plan that catalyses local food economies through development of co-operative food hubs and community food centres. Co-operative food hubs can support producers through co-operative processing and distribution enabling resources and access to Wales-wide retail and procurement outlets. Community food centres can be spaces for diverse communities in Wales to come together to access healthy, local and affordable fresh produce, foster vibrant food cultures, educate about co-operative values and principles and catalyse local food innovation and enterprises. Together co-operative food hubs and community food centres can cultivate co-operative Welsh food economies and empower communities to achieve sustainable and just food futures.
- (vi) **Food cooperatives:** Further long-term investments in setting up food cooperatives at all levels and scales, so as to increase the density of co-ops across Wales. Link cooperatives to the development of food hubs, which stand to play an important role within the National Universal Food Framework with respect to design of community-based universal food programmes.
- (vii) **Digital markets:** Embrace and develop digital food markets and supply chains, linking consumers with producers and food hubs as part of the development of the foundational/circular economy in Wales. Such digital tools already exist, for example in the Open Food Network (OFN) (see case study 5 below), which can also make market data open source and publicly available, assisting producers, cooperatives and food hubs in making cultivation decisions. The OFN is a global network of people and organisations working together to reconnect producers and consumers by developing open and shared resources, knowledge and software to support a better food system in the form of an open source software platform that makes it

easy to create innovative, independent community food enterprise.^{lxviii} Such a tool would support the design of community-based universal food programmes and illustrate that the tools needed to achieve such programmes already exist.

Case Study 5:

Open Food Network^{lxix}

The Open Food Network is a platform co-operative supporting the development of hubs for local food distribution. Members include food producers and food hubs and shops. Via the online platform, producers can sell to other shops and hubs as well as direct to consumers; wholesalers can manage buying groups and supply food hubs; communities can set up food hubs enabling trade and distribution within the local community.

Currently, over 1,000 producers and around 60 community enterprises running local food hubs are registered on the Open Food Network UK. Open source software supports the distribution of local food via food hubs. As a model of co-operatively managed software, all members collectively own the software and data. According to Nick Weir (Open Food Network):

"OFN shortens food supply chains...giving as much of the value to the producer whilst making food as affordable as possible to the eaters." (OFN)

- (viii) **Sustainable dietary guidelines:** Promote healthy eating and sustainable diets in public institutions and encourage private sector small business growth from the farm to the high street. **Wales needs to set and develop ambitious sustainable dietary guidelines** and establish a sustainable dietary advisory board to develop and check that these guidelines are working. Food Sense Wales has already contributed significant work on this point and would play a central role. Such a board would bring in universities and Public Health Wales and task the Future Generations office to champion this process of dietary improvement year-on-year. All public and private food contracts should be required to apply the new sustainable dietary guidelines.

Promoting the Welsh Brand for healthy and sustainable food:

- (ix) **Quality food standards:** Protect, build upon and aim for higher food standards; maintain the current EI PGI/PDO recognitions and extend them. This is particularly important to progress, given Brexit and the need to distinguish quality food standards across the UK as well as within Wales. These standards should include sustainability criteria in addition to point of origin and build on the work that Welsh Government has already achieved through the Good Taste Awards, for example.
- (x) **Promote Welsh Food in a British Isles context:** Reformulate, in the context of Brexit, a proactive food export strategy most centrally in the UK and link this explicitly to the Welsh Tourism Brand, and the development of Welsh cuisine in the UK market. Major confusions currently exist regarding the future of designated protected area brands in Wales and the rest of the UK as part of Brexit trade negotiations in 2020. There will also be a growing need to export nutritious food across the UK, with particular attention to making it accessible to low-income households. There is considerable market potential for nutritional and agroecological food grown in the UK.

This vision should be delivered through targeted and redirected funding packages, including post-Brexit funding for farming and regional development. This will require **wholesale reorganisation of current Welsh Government departments** which are currently based upon sectoral working (e.g. agriculture, food industry; health, environment and natural resources). It follows that any funding mechanisms developed will need to be targeted at delivering sustainable transformation.² Current proposals to change agricultural policy, food policy and environmental policy are being pursued separately in traditional silos. Yet Brexit, and the removal of the EU CAP system, plus the Well-being of Future Generations Act and NRW's area-based approaches, provide new opportunities to dovetail these separately defined policy fields. Sustainable farming, sustainable food policy and wider national environmental policy all need to be pointing in the same direction based upon the collective vision. In this sense, and adopting global and UN goals of food sovereignty, **Wales needs to promote its new food policy as a major public policy for developing and delivering sustainable food security for all.**

4.3 Infrastructures: re-building sustainable food provision

These transformations will require changing the shape of our food infrastructures to address physical, economic and governance variables. In many ways, food infrastructures need re-building. Many scholars have talked about the prevailing 'missing middle' in sustainable food supply chains. To support local supply chains and rebalance the distribution of power, infrastructure is needed in towns and the countryside to link food producers to consumers in more diverse ways. This means more sites for food markets, community retailers and food processors, investment in food cooperatives and the development of a network of food hubs that aggregate and distribute local food. Local authorities should be required to make plans for developing food hubs, which could facilitate local and regional provisioning and procurement for the public sector as well as private buyers.

Wales should embrace and develop digital food markets and supply chains that link consumers with producers and food hubs. Increasing citizen ownership and involvement in a more localised food system can improve community cohesion as well as help shape what is produced

and how. These re-localised infrastructures will also allow retailers to stock more local food produced through agroecological based farming practices.

4.4 Delivery Mechanisms

To realise the new food vision for Wales and build the necessary food infrastructure, an integrated set of policies and funding mechanisms need to be developed. Public Service Board Well-being Plans and Well-being Assessments, Natural Resources Wales's Area Statements and the school curriculum should be key vehicles to deliver sustainable food production and consumption.

Any post Brexit agricultural and land management policy needs to support farmers to make the necessary transformations towards sustainable land management. Welsh Government's 'Sustainable Farming and our Land' consultation will predominantly reward farmers and land managers for delivering environmental public goods, such as biodiversity, carbon sequestration, water and air quality. However, in addition to this, **any post Brexit agricultural and land management** policy needs to support farmers to make the necessary transformations towards sustainable land management. Enabling changes to agricultural practices needs to be a central part of Wales' post Brexit agricultural and land management support mechanisms, and these need a high degree of linkage with overall environment and food policy outcomes. Recent economic research shows that positive economic and income benefits can be considerable for farmers who make these transitions towards lower stocking levels, a stronger reliance upon pasture-based grazing, elimination of artificial feeds and fertilisers, and higher levels of farm diversification and agri-forestry in upland farming systems. An example of this transition, also known as the 'Less is More' approach, is shown in case study 6 below.^{3x}

Case Study 6:

Tony Davies, Henfron Farm, Elan Valley

"When I took over the farm over 20 years ago, I adopted the less is more approach, which included reducing sheep number from 1800 to 600. We now farm on a low input organic model which avoids using any imported fertilizers and very little bought in feed. The beauty of it lies in the fact that it's actually profitable—we're a business at the end of the day and we do make money. There is also another benefit...I have created a farmed landscape which appeals to lots of insects, bees, moths, butterflies, birds and mammals. The small herd of cattle that we've reintroduced to the farm has done a great job at managing these habitats, particularly for the golden plovers nesting on the mountain. And we're also producing food! The sheep that are needed to manage this habitat produce enough meat for 50,000 lamb burgers every year."

A new **Wales Food Commission** should be established to oversee the delivery of the food system strategy, comprising the Future Generations Commissioner, Area Statement leads, education and public health boards, Welsh Government leads on food policy (including agriculture, procurement, health and social care) and food practitioners (including community-based organisations and environmental NGOs).

We also recommend, as highlighted above, creating a **National Universal Food Framework** to ensure all Welsh people have the right to access healthy food.

5. Conclusions: Policies for transformation.

This paper advocates what many might see as a radical set of proposals for reconfiguring and realigning food policy in ways which stimulate a necessary and urgent total food transformation in Wales, with ambitions to extend and relate to the post Brexit UK. Unlike 2010 when Food from Wales : Food for Wales was prepared, a decade of financial-state austerity, the recognition of systemic dysfunctions in food diets and food poverty, rising awareness of both the climate and nature crisis, and the policy vacuum created by Brexit, now means that national governments and wider public authorities need to take more urgent concerted and coordinated action to stem the nature of this humanitarian crisis. This is a crisis which contravenes global international human rights and UN sustainable development goals and particularly affects the young and vulnerable.

Fortunately, Wales holds its own independent statutory Well-being of Future Generations Act framework; and importantly the five ways of working in partnership and collaboration with others which should statutorily require government bodies to centrally address this urgent agenda. Developing a food system strategy for Wales as *public policy* thus needs to be centrally aligned to the Act. This is far more, as this paper argues, than a 'ticking box' exercise associated with different incremental and fragmented policy statements and conventional consultation exercises.

It requires a new and refreshed approach to sustainable food governance. For too long, food governance has been part of the problem rather than part of the solution.

This is not just a role for Welsh Government, although Welsh Government needs to take the lead. It means developing a collaborative and preventative *governance* approach that builds an infrastructure that is sufficiently robust—both horizontally (in integrating and progressing a genuine systems approach) and vertically (in operating across different governance and spatial scales). As we argue, this infrastructure needs

to be based upon the development of a collective co created vision— **a vision of sustainable transformation**—one which progressively reduces the widening social and economic disparities we now face when it comes to food, diet and health. There is nothing more fundamental (or indeed 'Foundational') than this for arresting the risks under which we are currently putting our youth and our environment.

In advocating this approach to re-building food policy in Wales as part of the UK, as these arguments are based on long-running evidence-based scientific research, we need to understand that a major barrier cannot continue to be incremental and fragmented government actions. Welsh Government needs to proactively build a new consensus around the shared and derived vision; and then evolve a new governance infrastructure which explicitly progresses the Act's five ways of working and aligns the food system to the Act's well-being goals. This report has focussed upon what Wales and its devolved governance structures can do, by specifying 10 major areas and building blocks for transformation (see 4.2 above) and indeed where Wales in the context of the UK after Brexit can take the innovative lead. This building blocks for transformation need to be supported by the development of the appropriate infrastructures and delivery mechanisms, including the creation, as we propose, of a **National Universal Food Framework**, and it means jettisoning traditional modes of consultation, by creating, in cooperation with local authorities, their Public Service Boards and their well-being plans and goals, new participatory approaches at local, regional and national levels.

In writing this report we clearly recognise that the proposals developed here will need further refinement, specification and development in the short term. For instance, a more specific and in-depth debate and consideration, and a pragmatic plan of actions and timings will need to be developed over both a five and ten-year time period. We recognise that this transformation will take this length of time, but urgently recommend that the time to start this process is now. We recognise that open and more formalised channels of policy mediation will need to be developed between Welsh food policy and that developing across the UK. Given the uncertainties (and indeed potential opportunities) posed by the UK-wide need to develop a new governance framework for food, not least in the area of food standards and trade post Brexit, these actions and strategies are all the more urgent for Wales.^{3xii}

We know people and their communities care about food; we also know that people are increasingly demanding actions on the part of governments to act to create safe and nutritious ways of feeding the population. Food indeed can build and regenerate communities, and as we know is part of the Foundational Economy. Government needs to lead and empower these community and cooperative actions not least through progressing a national food system transformation.

² There are important policy decisions to be made regarding future farm support concerning public payments for farmers to protect and enhance the environment. Current EU CAP policies are not adequate to develop the sustainable transformations needed to our farmed landscapes, partly because they still rely upon an 'income foregone' assumption which means that farmers get subsidised for the potential 'loss' of income if they pursue environmental studenthip practices. Evidence from across Europe shows that such policies are not enough, and indeed are driving negative outcomes for nature, water, air, soil and our landscapes.

Brexit provides an opportunity to radically change these policy assumptions, and to 'raise the regulatory bar' on what the public expect regarding standard farm practices, at the same time as targeting any public support payments towards changes and distinct improvements in sustainable farm practices. These public payments thus need carefully targeting so as to change farm practices, and be backed up by sound advice and farm plans. (see recent Environment, Climate Change and Rural Affairs Report, Welsh Assembly November, 2019).

³ We recognise that the Welsh Government has embraced and funded projects under its policy to develop the 'Foundational Economy' in Wales under its recent Economic Action Plan, and would propose ways of developing this approach to food policy especially in supporting independent food businesses and, indeed farm businesses. There is no reason why farming should be seen as outside of this policy arena of Welsh economic policy.

Endnotes

- i. Experts agree that there needs to be “a radical rethink of business models, food systems, civil society involvement, and national and international governance” to address the interlinked crises of obesity ([The Lancet Commission on Obesity, 2019](#)), undernutrition, poverty ([Statement on Visit to the United Kingdom, by Professor Philip Alston, United Nations Special Rapporteur on extreme poverty and human rights, 2018](#)), climate change ([IPCC 2019 Climate Change and Land](#)) and ecosystem degradation and biodiversity loss ([State of Nature 2019: IPBES 2019 Global Assessment Report on biodiversity and ecosystem services](#)).
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- iii. Food Standards Agency, [Food Security in Wales](#), March 2018
- iv. The Food Foundation, [Affordability of the UK's Fatwell Guide](#), September 2018
- v. Public Health Wales, [The case for action on obesity in Wales](#), 2018
- vi. Natural Resources Wales, [The State of Natural Resources report](#), 2016
- vii. The National Biodiversity Network, [State of Nature Report](#), 2019
- viii. The National Biodiversity Network, [State of Nature Report](#), 2019
- ix. The National Biodiversity Network, [State of Nature Report](#), 2019
- x. National Atmospheric Emissions Inventory, [Greenhouse Gas Inventories for England, Scotland, Wales & Northern Ireland: 1990-2016](#), June 2018
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- xii. See De Schutter, O, Jacobs, N, Clement, C et al. [Towards a Common Food policy for the European Union: the policy reform and realignment that is required to build sustainable food systems in Europe](#). Brussels: IPES-Food, 2019. Food, Farming and Countryside Commission. Royal Society of Arts, [Our Future in the Land](#), July 2019; and Eat-Lancet, [Healthy Diets From Sustainable Food Systems](#) January 2019. <https://www.thersa.org/globalassets/reports/rso-ffcc-our-future-in-the-land.pdf>
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- xvi. Natural Resources Wales, [Advice note on the Water Framework Directive](#), November 2017
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- xviii. WWF, Risky Business, October 2017
- xix. Welsh Government, [Healthy weight, healthy Wales](#), accessed January 2019
- xx. Public Health Wales, [The case for action on obesity in Wales](#), 2018
- xxi. The Trussell Trust, [End of Year Stats](#), accessed January 2020
- xxii. Many policy reports including those from the farm unions and studies by the Parliamentary Welsh Affairs Committee (1999, 2002) have indicated that processors and especially retailers are powerful price setters in agri-food chains from Wales. Such reports led to the establishment of the Office of the Grocery Adjudicator to oversee contracting practices in UK food supply chains. But this had done little to address more equitable sharing of value regarding producers, with the powers of the Adjudicator limited with regard to direct contracting arrangements between producers and retailers. By 2015, the top four supermarkets in the UK accounted for 73.7% of UK markets share. The level of retail concentration in the UK prompted investigations by the Competition Commission and has been described as a form of ‘asymmetric oligopsonistic’ power where the number of buyers is small while the number of sellers is large (Hollingsworth, 2004). Increasing retail concentration: evidence from the UK retail sector. *British Food Journal*, 106, 8, 629-638.
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- xxviii. See Clark, M. and Tilman, D., 2017. [Comparative analysis of environmental impacts of agricultural production systems, agricultural input efficiency, and food choice](#). *Environmental Research Letters*, 12(6), p.064016.
- xxix. Veg Power, <https://vegpower.org.uk/>, accessed January 2020
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- xxxii. National Assembly for Wales, [Rethinking Food in Wales Public Procurement of Food](#), May 2018

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- xxxv. Welsh Government, [Towards Sustainable Growth - an Action Plan for the Food and Drink Industry 2014-2020](#), accessed January 2020
- xxxvii. [Written response](#) by the Welsh Government to the report of the Climate Change, Environment and Rural Affairs Committee entitled [Rethinking Food in Wales: Public Procurement of Food](#). 24 August 2018
- xxxviii. Adams, M (2014) studied the re-location and movements of foods in the dairy, beef and horticultural sectors in Wales and England. PhD Thesis Cardiff University: ‘Regional food systems in Transition’ (hard copy available). All three sectors have lost local and regional processing infrastructures over the past decade, most recently meat processing and dairy processing.
- xxxix. Public Policy Institute for Wales, [Food Policy as Public Policy](#), June 2016
- xxl. Royal Society of Arts, [Our Future in the Land](#), July 2019
- xli. Public Policy Institute for Wales, [Food Policy as Public Policy](#), June 2016 (see page 28)
- xl. The International Covenant on Economic, Social and Cultural Rights (ICESCR) is an international treaty which aims to ensure the protection of economic, social and cultural rights, such as the rights to work, social security, health and education. Article 11(1) of the Covenant recognises the right of everyone to an adequate standard of living, including adequate food, clothing and housing, and to the continuous improvement of living conditions. Article 11(2) guarantees the fundamental right of everyone to be free from hunger, and obliges State Parties (i.e. those countries that have ratified the Covenant, hereafter referred to as “states”) to take steps in this regard, including the improvement of methods of distribution of food, and dissemination of knowledge concerning the principles of nutrition.
- xl.iii. The UN Special Rapporteur on the Right to Food is an independent expert appointed by the UN to examine, monitor, advise and publicly report on realisation of the right to food – see <http://www.srfood.org/en>, accessed January 2020
- xl.iv. UN Special Rapporteur on the Right to Food, Jean Ziegler, Promotion and Protection of all Human Rights, Civil, Political, Economic, Social and Cultural Rights, including the Right to Development, 2008, para. 17, available at: [Report of the Special Rapporteur on the right to food](#)
- xl.v. NatCen Social Research, [Food Security in Wales](#), March 2018 (See pg.2)
- xl.vi. The Food Foundation, [Affordability of the UK's Fatwell Guide](#), September 2018
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- lii.vi. Public Health Cymru network, <https://www.publichealthnetwork.cymru/en/topics/nutrition/nutrition-skills/>, accessed January 2020
- lii.vii. First Campus, [SHEP - School Holiday Enrichment Programme \(Food And Fun Wales\)](#), accessed January 2020
- lii.viii. Soil Association, <https://www.foodforlife.org.uk/>, accessed January 2020
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- lxxi. see for instance the start of discussions by the UK Trade Policy Observatory, University of Sussex about the potential multi-level governance 'vacuum' developing in the UK post-Brexit. Lydgate, E, Anthony, C, Millstone, E (2019) [Destruction of the Union: too high a price to pay for a US Trade Agreement](#). Briefing paper 38, UK Trade Policy Observatory.

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