

PLENTY

Food, Farming
and Health in a
New Scotland

From the Scottish Food Coalition – for a socially and environmentally just food system

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This document has been developed with contributions from:



It is supported by:



Executive summary

We have plenty of land in Scotland, and plenty of sea, and plenty of skilled people, scientists and innovators. There's no reason why we shouldn't have plenty of good food for everyone.

But people in Scotland are going hungry or are reliant on foodbanks in order to eat. At the same time, jobs in the food sector are insecure and poorly paid. Industrial scale agriculture is contributing massively to climate change and harming our wildlife. Farm animals suffer whilst antibiotic resistance continues apace, and more and more of us are suffering from poor health. Our farmers and fisherman cannot make a decent living.

Our food policies are not working for our people or our planet. We need to find a better way to feed ourselves without damaging the world we live in. This document from the Scottish Food Coalition sets out our aspirations for better food. As organisations, we have come together because we believe everyone should be able to enjoy food. People alive today and into the future should experience plentiful, tasty, nutritious food.

At the moment, our food system is characterised by inequalities and exploitation. People face the double burden of poverty and ill health, whilst our natural resources, animals, and workforce are exploited. To reimagine the food system, so that everybody can access enough good food, we need to see that all these problems are connected and we need to question the very system that underpins our approach to food. Tinkering at the edges, or focusing on any one of these issues without consideration of the others, is not enough. They are all urgent issues, and all related. We want a just transition to a new food system; one founded on the principles of social and environmental justice.

The good news is, transformational change of Scotland's food system offers tremendous opportunities. We could be happier and healthier, living in a more equal society with a more resilient economy, and a thriving natural environment too.

Transformation is entirely possible. We already have Government commitments to address inequality, climate change, declining wildlife and poor health. We now need to take action, using our resources strategically and working together to create a food system fit for purpose.

This report articulates, in four sections, what a different food system could look like, why we can't continue with business as usual, and some initial steps for making the change.

First, 'People Matter' makes the case for a food system that values people. Everybody should be able to access food with dignity; people working in the food sector should be valued; and we should all have a say over the rules that govern our food system. We need the Scottish Government to:

- + Take immediate action to prevent food poverty by providing an adequate safety net for those affected through the Scottish Welfare Fund and other crisis support services.
- + Enshrine the Right to Food into Scottish Law.
- + Encourage all employers to become accredited Scottish Living Wage employers, and continue and expand the work of the Agricultural Wages Board.
- + Use new powers to both improve the value of social security support in Scotland and the operation of those benefits that are being devolved, so that everyone can afford to buy healthy food.
- + Create structures to ensure the governance of our food system is more democratic, facilitating greater public participation in food policy and reining in the power of corporations.



Pittendreich Farm near Milnathort, Flickr Creative Commons.

Second, ‘The Environment Matters’ highlights the need to prioritise sustainability so that we can produce food, both now and into the future. This means taking greater care of the natural environment on which food production itself depends. It also means reducing, and ultimately ending, the wider negative environmental impacts of our whole food system, including its impacts on our climate. We need the Scottish Government to:

- + Establish agroecology as the underlying principle of farming in Scotland, and set out a programme to embed it in practice.
- + Champion a reform of the CAP that supports and develops truly sustainable production.
- + Ensure more effective implementation and enforcement of existing environmental legislation throughout the food supply chain.
- + Take a whole system approach to reducing the impact of our food on the climate.

Third, ‘It’s about more than food’ shows that what we eat, and how much of it are critical determinants of our health. The ‘Scottish diet’ has won no accolades and there is a general consensus that the food habits of Scottish citizens need to change, and quickly. But food is about a lot more than calories: we know that food can nourish us in so many more ways than simply the physiological. Improving our food culture and engaging more with the food we eat can have wide ranging benefits. We need the Scottish Government to:

- + Lead by example, with all food purchased with public money and served in the public sector, being nutritionally balanced and sustainably sourced.
- + Introduce a retailers and caterer’s levy, which would require operators of multiple outlets to

report periodically on the nutritional composition of their sales and pay a levy on the difference between their sales and the national nutritional targets.

- + Support community food initiatives, helping to provide access to resources such as land, as well as training and development opportunities.
- + Develop ‘whole school food plans’ which connect the curriculum with catering and the community, link schools with local farms and embed food into teacher education on sustainability.

Fourth, ‘Short supply chains go further’ points to how our current models of food production, distribution and supply are increasingly large scale and industrialised. Fewer and fewer individuals benefit economically from this system while many of us bear its social and environmental costs. Increasingly, we lack connection to our food. Relatively few people are engaged directly in producing or harvesting food and the majority of us are largely ignorant of the practices and processes by which food comes to our plate. Our food system could be very different, with significant benefits for all. We need the Scottish Government to:

- + Strengthen the powers of the planning system to ensure the vitality and diversity of town centres and safeguard land for growing food.
- + Invest in regional food economies connecting urban populations with rural producers – including community land ownership and community-connected agriculture.
- + Make prime spots available in town and city centres to facilitate farmers markets, drop-off points for buying groups and other models for supporting and facilitating short food chains.

Whilst we need Government to take a lead, everyone has a part to play in getting us from where we are now, to where we want to be. Individuals, producers, civil society, businesses and Government all need to act, and act with urgency and purpose. The change we need can be summarised as follows:

1. *Greater policy co-ordination and coherence*
2. *Government, its agencies and all public bodies to drive up standards, 'demonstrate by doing' and lead the way to better food systems*
3. *A more democratic and inclusive food system*
4. *A new 'sustainable development' approach throughout the food chain*
5. *People with the knowledge and resources (financial and otherwise) to make good food choices*
6. *To lead the way and learn from best practice, beyond our borders*

To drive all this forward we are calling for primary legislation that, amongst other requirements, enshrines the Right to Food in Scottish law, promotes agroecology as the farming method of the future, and creates a statutory Food Commission. This Commission would provide oversight and scrutiny of our food system and report on it annually to Parliament. It would be obliged to consult with civil society, and be able to commission research, issue advice and work with all relevant agencies to assist in the transition to a better food system.

Our aim in writing this report is to make the case for change and encourage debate on this important subject. We look forward to dialogue with others going forward.



Gambian Scotch Egg, The Empire Cafe, 2014.
Photo by Clem Sandison.

“People have become accustomed to the use of a minimum diet for the maintenance of life in calculating the cost of living, and it is well-known that people can be kept alive for varying periods on diets with varying degrees of deficiency. The level of the standard adopted here – the optimum – is not just to provide a diet which will keep people alive, but a diet which will keep people in health; and the standard of health adopted is a state of well-being such that no improvement could be effected by a change in the diet.”

John Boyd Orr (1936), *Food Health and Income*, Rowett Research Institute.

INTRODUCTION



We all have to eat; it is one of our most basic human needs. As a society, how we meet that need – from the way in which our food is produced, distributed and sold to our own consumption choices – has major consequences for us, and the world in which we live. On the face of it, many of us live in a world with more choice about food now than ever before. But we only have to scratch the surface and it soon becomes clear that our food system is seriously flawed.

We face a growing list of problems: widespread food insecurity; persistent diet related ill health; agriculture's ever-expanding footprint; diminishing wildlife; dwindling fish stocks; mounting food waste; insecure employment; and a lack of democracy in our food system. Profit is being put before people and the planet. We cannot continue as we are.

These problems are widespread and interconnected, as apparent here in Scotland as they are across much of the world. In many cases, we need big, global commitments to solve them but there is much we can do here at home to start to make a difference. The good news is that progress is already being made. The United Nations 'Paris Agreement'¹ on climate change recognised the importance of food security and ending hunger and how vulnerable our food production systems are to unchecked climate change. Governments across the world are now committed to taking action. The UN Sustainable Development Goals,² effective as of 1st January 2016, aim to '*End hunger, achieve food security and improve nutrition and promote sustainable agriculture*'. Scotland, as part of the UK, is not only a signatory to these commitments but has set ambitious domestic targets to reduce greenhouse gas emissions,³ tackle poverty and health inequalities and work towards a fairer society.⁴

Scotland can lead the way, showing how 'good food' is possible and, as a result, reaping many economic, social and environmental benefits. We have plenty of land and extensive seas. We have the science, the farmers, the skills and the people – and there is widespread support across civil society and the political parties for doing better with food.

We recognise there may be some who think we want to turn back the clock or that we hanker after some notion of the 'good old days'. This is far from the case; we are not anti-progress. We do, however, challenge many aspects of our current model of food production, distribution and supply and highlight the problems these cause. Looking ahead, we recognise the need for our food systems to evolve and develop, with our decisions informed by sound science and making best use of both existing and new knowledge.

This document has been written by a group of organisations that share common cause in wanting a better food system in Scotland and believing it can be achieved. We have come together to encourage debate and to make the case for change. We want a just transition to a new food system; one founded on the principles of social and environmental justice and that provides good food for everyone within safe environmental limits.

We present our ideas here under four main headings, based on our agreed principles: People matter; The environment matters; It's about more than food; and, Short supply chains go further.

The scope of the document is wide and the support of an organisation does not necessarily imply endorsement of everything covered. Our aim is rather to show how we need to move out of siloed thinking and recognise the many inter-related problems that need to be addressed.

Delivering change will need strong leadership from Government and new approaches by food producers, distributors, retailers, caterers and citizens. Scotland has little to lose and much to gain by moving more boldly down this path. It's time everybody experienced plentiful food.

¹ United Nations Framework Convention on Climate Change (2015), The Paris Agreement, available at: <https://unfccc.int/resource/docs/2015/cop21/eng/109r01.pdf>

² United Nations Sustainable Development Goals (2015), available at: <https://sustainabledevelopment.un.org/?menu=1300>

³ Climate Change (Scotland) Act (2009), available at: <http://www.gov.scot/Topics/Environment/climatechange/legislation>

⁴ The Scottish Government strategic objectives, available at: <http://www.gov.scot/About/Performance/scotPerforms/objectives>

1 PEOPLE MATTER



New entrant farmers Rosy McLean and Bryde Marshall from Meadowsweet Organics and the Falkland Kitchen Farm, Fife.

In wanting a just transition to a better food system, we start with people. Many people earn their living from producing and selling food but food is so much more than just a product or commodity to be traded for profit. Food is fundamental to our survival, health and well-being and is part of our culture and social dynamics. Everyone should have enough nutritious food to eat and our food system should benefit, and be fair, to all of us.

Our hope and expectation

Nobody suffers from hunger in Scotland. Alongside access to healthcare and education, everyone has access to adequate food that is nutritious, culturally appropriate, safe and affordable.

The right to food is fully realised. Population-wide measures to guarantee access to good food provide freedom and security; people are getting on with their lives without anxiety about where the next meal will come from.

We've changed the way we import food, ensuring equitable and mutually beneficial trade relationships, so those who labour to produce our food abroad do not suffer from hunger either.

We value the contributions of all workers in the food sector. Everyone – food producers, processors, chefs and distributors – earns at least the living wage. Employment rights are respected and protected, with quality training, and strong health and safety standards. As the infrastructure of our food system shifts, from one based on a global commodity market, to one centred on localised production, processing and retail, employment opportunities also change. However, this transition is implemented in a just way, with the involvement of workers in decisions and the provision of training and development opportunities.

Food policy in Scotland is joined up at cabinet level – across health, environment, agriculture and fisheries, education, economy and social justice – with widespread public participation in its development and implementation. Democratic governance has redirected public funds. Instead of gifting subsidies to landowners (with the biggest farms on the best land getting most of the money), we reward farmers for the provision

of public benefits such as healthy food, abundant biodiversity, valued landscapes and the storing and slowing of floodwaters.

There's adequate funding for independent checks on food safety and quality. More effective regulation and monitoring, combined with simplifying food chains, have stopped food fraud: we know what's in our food. Clear labelling and restrictions on the advertising of unhealthy food mean that people are empowered to make healthy and sustainable food choices. This shift is also reflected in public procurement, where Government has embedded a strong commitment to the provision of healthy and sustainable food in the public sector and wherever public money is used.⁵

The involvement of citizens and communities in their local food economy has led to a more exciting and diverse food environment. People are benefitting from a broader approach to food – where it is seen as a cultural asset, and a way to connect us to each other and our environment, rather than simply a commodity to be bought and traded.



Scaling dough at a Bread Matters workshop, photo by Veronica Burke.

⁵ Civil society coalition (2015), Civil society priorities for procurement in Scotland, available at: http://www.unison-scotland.org.uk/publicworks/Procurement-10asks-regs+guidance_Apr2015.pdf

The case for change

We know that food poverty is a growing problem in Scotland; however, in the absence of systematic monitoring, we know little about how it affects different sections of the population.

Food bank usage has increased dramatically; 117,689 people in Scotland were provided with emergency food aid by Trussell Trust in the financial year 2014/15, compared with 71,428 people in 2013/14 and 14,332 in 2012/13. Almost one third of those receiving emergency food aid are children.⁶

However, food banks provide only a very limited picture of food insecurity.⁷ With 20% of people in Scotland living below the poverty line,⁸ and with stagnant wages and an increasingly inadequate social security system, we know that food insecurity is far more extensive than just food bank usage.

Poorer households spend a greater proportion of their household income (almost twice as much) on food and non-alcoholic drink compared to wealthier households. They can feel compelled to seek out cheap food, which is often lacking in nutritional content, in order to balance shrinking budgets.⁹

Refugee families have been identified as being at greater risk of food insecurity, along with low-income families, particularly those with young children. 41% of parents in the lowest income group in Scotland acknowledge that income has an effect on the food they provide their children, compared with 11% in the highest group. 39% of five year olds in the lowest income quintile suffered from poor diets, compared with 13% in the highest.¹⁰

Poor nutrition in childhood has a long-lasting impact in terms of health and development; it is a contributing factor to the persistent attainment gap in Scotland, where children and young people from lower-income households do significantly worse at

all levels of the education system than those from better off homes.¹¹ Among children of all ages, food insecurity is linked with lower cognitive indicators, erratic behavior, and emotional distress. Reduced academic achievement is not the only legacy of food insecurity in childhood; the health effects persist into adulthood, with a growing body of evidence that links early childhood malnutrition to adult disease, including diabetes and cardiovascular disease.¹²

Until recently, much of the response to the growing prevalence of food poverty in Scotland has been addressing the immediate challenge of providing food – any food – without dealing with the systemic causes of food insecurity.

This approach, which depends on donations and food that would otherwise be wasted, runs contrary to the principles of human dignity. People are denied autonomy over what they eat and the food itself may be inadequate in terms of nutritional value, balance and cultural appropriateness. The stigma associated with using a food bank means many of those most in need are reluctant to rely on this system.¹³

Ironically, many of those working in the food sector (which accounts for 1 in 7 jobs in Scotland) are likely to be food insecure as jobs in this sector remain among the least well paid and most precarious. Workers on zero hours contracts may not know from one day to the next what shift they are working tomorrow and in which location.

Wages in all parts of the food system – agriculture, manufacturing, retail, hospitality and services – are below the UK average.¹⁴ While the decision of the Scottish Government, following consultation, to retain the Scottish Agricultural Wages Board should be welcomed, there is more to be done to ensure decent employment opportunities in the sector.

⁶ The Trussell Trust, food bank statistics with regional breakdown, available at: <http://www.trusselltrust.org/stats>

⁷ Silvasti T, Riches G (2014), Hunger and Food Charity in Rich Societies: What Hope for the Right to Food? First World Hunger Revisited: Food Charity or the Right to Food?, p.191.

⁸ Scottish Government, Poverty and Income Inequality in Scotland 2013/14, available at: <http://www.gov.scot/Publications/2015/06/7453/0>

⁹ Douglas F, Ejebu O, Garcia A, MacKenzie F, Whybrow S, McKenzie L, Ludbrook A, and Dowler E (2015), The Nature and Extent of Food Poverty/ Insecurity in Scotland, available at: www.healthscotland.com/documents/25717.aspx

¹⁰ Scottish Government (2009), Growing up in Scotland: Sweep 3 Food and Activity Report, available at: <http://www.gov.scot/Resource/Doc/257716/0076467.pdf>

¹¹ Royal Society of Edinburgh (2015), The Education (Scotland) Bill: a response to the Scottish Parliament's Education and Culture Committee, available at: [http://www.scottish.parliament.uk/S4_EducationandCultureCommittee/Education%20\(Scotland\)%20Bill/RoyalSociety_of_Edinburgh.pdf](http://www.scottish.parliament.uk/S4_EducationandCultureCommittee/Education%20(Scotland)%20Bill/RoyalSociety_of_Edinburgh.pdf)
Eoin Murphy (2010), Effect of Free School Meals on Educational Attainment, available at: <http://www.niassembly.gov.uk/globalassets/Documents/RaiSe/Publications/2010/Employment-Learning/8610.pdf>

¹² American Academy of Pediatrics (2015), Promoting Food Security for All Children, Pediatrics vol. 136, no. 5.

¹³ Douglas F, Ejebu O, Garcia A, MacKenzie F, Whybrow S, McKenzie L, Ludbrook A, and Dowler E (2015), The Nature and Extent of Food Poverty/ Insecurity in Scotland, available at: www.healthscotland.com/documents/25717.aspx

¹⁴ ONS (2013), Annual Survey of Hours and Earnings, available at: <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-328216>



Scottish Creel Fishermen's Federation.

Pervasive occupational segregation means it is predominantly women who work in the underpaid, insecure roles in the food sector, whilst men disproportionately make up the managerial positions.¹⁵ Where employed in the same job, men will on average earn more. For example in food and drink processing in Scotland, the mean wage for a woman is £7.80 per hour, with the mean for men £9.92.¹⁶

As well as issues of gender discrimination, exploitation is rife in the food sector. Migrant workers in particular can suffer appalling working conditions, with increased vulnerability to forced labour,¹⁷ and abuses of contracts and wages.¹⁸

The Scottish Government celebrates the continued growth in the food and drink sector;¹⁹ however, there is an urgent need to look beyond exports and address the major challenges of food poverty, employment abuse, and poor nutrition.

Prioritising exports over providing nutrition for people has not only been the policy in Scotland, it is reflected across the world. Most of the 795 million people globally who don't have enough to eat are food producers.²⁰ For centuries, countries have traded food to supplement domestic production; however, it is only in recent decades (largely due to interventions by the World Trade Organisation and international free trade agreements) that producing food for export has been given precedence over producing food to eat. This has had devastating consequences for small-scale farmers and people on low-incomes in Scotland and around the world, as well as for our environment and soils.

Food safety and democratic oversight of food is at risk, including from powerful corporations campaigning for EU deregulation of independent meat inspection,²¹ and major threats from trade deals such as the Transatlantic Trade and Investment Partnership (TTIP)²² and Trans-Pacific Partnership (TPP).²³

¹⁵ Engender (2014), Gender Equality and Scotland's Constitutional Futures, available at: <http://www.engender.org.uk/content/publications/Gender-equality-and--Scotlands-constitutional-futures.pdf>

¹⁶ Close the Gap (2015), Making Manufacturing Work for Women, available at: <http://www.closesthegap.org.uk/content/resources/Making-Manufacturing-Work-for-Women--Summary-of-research-findings-Close-the-Gap-June-2015.pdf>

¹⁷ Joseph Rowntree Foundation (2012), Experiences of forced labour in UK Food Industry, available at: <https://www.jrf.org.uk/report/experiences-forced-labour-uk-food-industry>

¹⁸ Unite the Union Scotland (2015), Scottish Agricultural Wages Board – Scottish Government Consultation, available at: [http://www.uniteunion.org/uploaded/documents/0000046-SAWB%20Consultation%202015%20\(1\)11-23168.pdf](http://www.uniteunion.org/uploaded/documents/0000046-SAWB%20Consultation%202015%20(1)11-23168.pdf)

¹⁹ Scotland Food and Drink (2015), Food and Drink Turnover hits record high, available at: <http://www.scotlandfoodanddrink.org/news/article-info/6230/food-and-drink-turnover-hits-record-high.aspx>

²⁰ Thomson Reuters Foundation (2015), Why are most of the world's hungry people farmers?, available at: <http://www.trust.org/item/20150527174457-gt30a/>

²¹ <https://www.unison.org.uk/at-work/local-government/key-issues/keep-meat-clean-by-keeping-meat-inspectors-independent/>
<https://www.unison.org.uk/news/article/2015/11/ttip-a-threat-to-the-food-on-your-plate/>

²² Global Justice Now (2016), What is TTIP?, available at: <http://www.nottip.org.uk/aboutttip/>

²³ Democracy Now (2016), Mystery Meat: After WTO Ruling, U.S. Tosses Meat Origin Labeling Law, Leaving Consumers in the Dark, available at: http://www.democracynow.org/2016/1/7/mystery_meat_after_wto_ruling_us

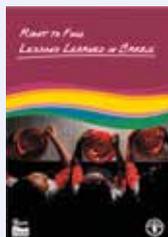


Government-supported farmers' market in in Brazil.

CASE STUDY

*Scotland could be more like Brazil and decide that food insecurity has no place in a modern nation with plentiful food production.*²⁴

Brazil's rights-based approach to tackling food insecurity joins up policies on social assistance, health, education and labour. Policy coherence across government departments has helped to define a framework and lay down some broad principles; this is combined with effective citizen-government partnerships to create the strategies for implementation.



Brazil's road to the Right to Food

Identifying the hungry: In 2004 Brazil created a baseline measurement of the various levels of food insecurity. A comprehensive population profile, with disaggregated data, showed where the right to food was not being realised, and allowed the impact of public policies to be measured.

Government/civil society partnership: In recognition that eradicating food insecurity isn't the job of a single government department or civil society campaign, Brazil established the National Council on Food and Nutrition Security (CONSEA), which includes 18 state ministers and 36 representatives from civil society.

A framework law, with local implementation: Brazil passed the Federal Law for Food and Nutrition Security (LOSAN) in 2006. This required the state to:

'enforce the universal right to regular and permanent access to good quality food in sufficient quantities, based on healthy food practices which respect cultural diversity and which are environmentally, culturally, socially and economically sustainable.'

Zero Hunger Strategy: Strategies and approaches to realise the right to food ranged from providing daily school meals for 37 million children and adolescents, building 200,000 cisterns in rural areas to help with the irrigation on family farms, skills training for 400,000 people and \$1 billion in micro-credit loans, offering local farmers choice spots of public space to sell to urban consumers, market interventions to ensure that nobody is priced out of good quality, healthy food, and many more.

Zero Hunger is credited with reducing inequality to the lowest level Brazil has seen in over 30 years. Working towards realizing the right to adequate food has also led to improvements in education and housing, with a rights-based, participatory approach promoting dignity and self-respect.

²⁴ Food and Agriculture Organisation (2007), Right to Food, Lessons Learned in Brazil, available at: <ftp://ftp.fao.org/docrep/fao/010/a1331e/a1331e.pdf>

Next steps for Scotland

When people all over Scotland are worried about where the next meal will come from, relying on emergency food provision, and suffering the consequences in terms of mental and physical ill health, we must recognise that the food system is failing. We need urgent action and a long-term strategy, based on commitment to a fair and just society, to address these issues. The Scottish Government should:

1. Take immediate action to prevent food poverty by providing an adequate safety net for those who experience a gap in income through the Scottish Welfare Fund and other crisis support services.
2. Enshrine the Right to Food into Scottish Law²⁵ and adopt a co-production model for implementing the changes necessary to tackle food insecurity.
3. Encourage all employers to become accredited Scottish Living Wage employers, continue and expand the work of the Agricultural Wages Board to ensure decent employment opportunities in the food sector.
4. Use new powers to both improve the value of social security support in Scotland and the operation of those benefits that are being devolved, so that everyone can afford to buy healthy food.
5. Create structures to ensure the governance of our food system is more democratic, facilitating greater public participation in food policy.

CO-PRODUCTION is the process of active dialogue and engagement between people who use services and those who provide them. It aims to draw on the knowledge and resources of both to develop solutions to problems and improve interaction between citizens and those who serve them.



Making cheese at Cream O'Galloway, Castle Douglas.

²⁵ The Right to Food is Article 11 of the UN Covenant on Economic, Social and Cultural Rights, to which the UK is a signatory, available at: <http://www.ohchr.org/EN/ProfessionalInterest/Pages/CESCR.aspx>

2

OUR ENVIRONMENT MATTERS



Neilston Market Garden in Glasgow. Photo by Clem Sandison.

We need to ensure we can produce the food we depend on, both now and into the future. This means taking greater care of the natural environment – our soil, air, water and biodiversity – on which food production itself depends. It also means reducing, and ultimately ending, the wider negative environmental impacts of our whole food system, including its impacts on our climate. Our food system, both here in Scotland and globally, currently has an environmental footprint far greater than can be sustained.

Our hope and expectation

The way we produce our food is environmentally sustainable – looking after and, where possible, regenerating the resources on which we rely for our long-term food security.²⁶

Our food production systems work *with* nature, not against it; farming, fishing, processing, transportation and storage of food all maintain and enhance our environment, at home in Scotland and in those countries we import from. The agroecology approach to producing food, including certified organic production, conserves our soils and seas, mitigates climate change, and protects our wildlife, genetic diversity, landscapes and cultural heritage.²⁷

Our understanding of sustainable growing and fishing methods is developing rapidly with innovative approaches and new technologies enabling productive climate and wildlife-friendly farming. Research is co-produced with scientists, food producers and citizens establishing priorities, drawing on existing knowledge and expertise, and disseminating results effectively. There is a well-funded and respected advisory service, with one-to-one guidance (which is appropriate to local conditions) given to producers, as well as an active peer-to-peer support network. This is accompanied by a vibrant seed-saving and seed-sharing culture, making our food production less precarious and more sustainable.

AGROECOLOGY: the science of sustainable farming, it can be defined as “the application of ecology to the management of agricultural systems”. In this report we take this to include (certified) organic agriculture. Agroecology is also a political movement that aims to improve the way food is grown and processed globally.

A zero-carbon Scotland is in reach as sustainable food production is aligned with a broader agenda to combat climate change and create a resilient economy and society. An agroforestry revolution is well underway: reducing flooding and locking up carbon, whilst maintaining livestock production. Prime farmland is protected and new approaches to land management are increasing the carbon in cultivated soils and restoring peatlands. Practices such as crop rotations, biological pest control and biological nitrogen fixation create productive, resilient, and resource-efficient mixed systems. Wildlife is abundant in our countryside again; all farmers, crofters and growers value and protect the natural resources on which food production depends.

We have more organic closed-loop aquaculture systems that source fish feed without depleting wild fish stocks, and have effective bio-control measures to protect wild fish and shellfish populations from disease and pests.²⁸ Spatial management of fisheries is designed to protect and recover marine ecosystems, with investment in the monitoring of Scotland’s emerging network of inshore and offshore Marine Protected Areas.

²⁶ Charles, H, Godfray, J, Beddington, J R, Crute, IR, Haddad, L, Lawrence, D, Muir, J F, Pretty, J, Robinson, S, Thomas, S M & Toulmin, C (2010), Food Security: the challenge of feeding 9 billion people, Science. Vol: 327, no: 5967, pg: 812-818.

²⁷ Lampkin, NH, Pearce, BD, Leake, A R., Creissen, H, Gerrard, C L, Girling, R, Lloyd, S, Padel, S, Smith, J, Smith, L G, Vieweger, A, Wolfe, M S (2015), The role of agroecology in sustainable intensification. LUPG.

²⁸ Joint NGO paper (2014), Priorities for environmentally responsible aquaculture in the EU, available at: http://www.mcsuk.org/downloads/fisheries/MCS%20policy%20%26%20position%20papers/Joint_NGO_position_paper_aquaculture_2014.pdf



People are more connected to where their food comes from, know how it's produced and understand its environmental impact. More people from cities engage with farmers. The farmed environment and our seas and coast are rich in nature and through access to this, we feel active, connected and better in body and mind.²⁹

Factory farming on land and in water has become redundant in Scotland, as both the population and government recognise that it is not only unjust to farm animals, it also poses risks to our health and the environment. Instead, the meat, dairy and fish we consume come from animals that are treated well and killed humanely. We enjoy tastier food, that is better for us, and don't have to turn a blind eye to how it has got onto our plates.

The case for change

Our current approach to food production and consumption cannot be sustained. The evidence of the need for change is compelling; we only scratch the surface of it here. Globally, unchecked climate change will undermine our ability to feed ourselves. In Scotland, we are not well placed to deal with the volatility in global markets, which accompanies unpredictable weather and more extreme weather events. We are heavily dependent upon imports such as fertilisers and animal feeds, with limited local food chains. Disruptions to global supply chains will therefore exacerbate food insecurity, disproportionately affecting the poorest in society. A report by Asda found that 95% of their fresh food supply was vulnerable to climate change.³⁰

Food waste has been almost eliminated throughout the supply chain. The combination of more localised processing and distribution systems and a different social approach to food, means that valuable vitamins (with an inevitable environmental footprint) are no longer thrown in the bin. Nutrients from unavoidable food waste are recycled safely into food production, reducing the need for chemical fertiliser.

In the round, there is an understanding of and commitment to reducing the embedded energy and water use in all our food. This inevitably results in shorter supply chains and a greater abundance of – and access to – fresh, local and seasonal produce which don't require large amounts of processing, transportation and packaging.

While our food system is being dramatically affected by climate change, it is also a key contributor to the problem. It is estimated that production inputs to agriculture, such as fertilisers, agricultural production itself, and post-production transport, refrigeration and processing of products contribute 19%–29% of all global human related greenhouse gas emissions.³¹ In Scotland it is estimated that agriculture and related land-use accounts for 23.4% of greenhouse gas emissions and nearly all of Scotland's non-carbon dioxide emissions (that is nitrous oxide – largely related to fertiliser use, and methane – related to keeping cattle and sheep).³²

²⁹ Birdlife International, Wellbeing through wildlife in the EU, available at: http://www.rspb.org.uk/images/wellbeing_tcm9-148929.pdf

³⁰ Asda (2014), The Challenge of a Changing Climate, available at: http://your.asda.com/system/dragonfly/production/2014/06/17/15_38_19_612_4234_Climate_Resilience_Campaign_a5_Brochure_v10.pdf

³¹ Tilman, D, Fargione, J, Wolff, B, D'Antonio, C, Dobson, A, Howarth, R, Schindler, D, Schlesinger, W H, Simberloff, D & Swackhamer, D (2001), Forecasting agriculturally driven global environmental change. *Science*. Vol: 292, no: 5515, pg: 281-284.

³² Scottish Government (2013), Scottish Greenhouse Gas Emissions, available at: <http://www.gov.scot/Publications/2015/06/1939>

Halving the current consumption of meat and dairy products in the EU would achieve major health benefits as well as reductions of around 40% in agricultural nitrogen emissions and 25% to 40% in greenhouse gas emissions.³³

Our food system also has a major impact on wildlife, soils, air and water. The 2013 State of Nature report³⁴ warns that the countryside has been transformed in less than a generation, with wildlife declining at alarming rates. The report cites increased use of chemical inputs, intensification of agriculture, habitat loss and climate change as key factors for the decline. High Nature Value farming and crofting systems that produce food whilst supporting wildlife are under pressure to intensify. If we do not act soon, many once common birds such as the lapwing will no longer be seen in Scotland.

Scotland has a stunning and diverse natural environment upon which it both relies and trades heavily. However, to become a world leader in green farming we have to start by recognising that many of our upland and lowland environments are degraded and our natural capital depleted.

Scotland's marine habitat is already damaged and is further deteriorating. Over-fishing, high-impact fishing, and climate change are just some of the pressures on Scottish seas.³⁵

Conservation of biodiversity is as much a problem within the food system as in the wider environment. In the last decades, crop varieties have been selected for their yields alone – leaving cultural, taste, and nutritional considerations aside. Since the 1900s, 75% of plant genetic diversity has been lost. 30% of livestock breeds are at risk of extinction; six breeds are lost every month. 75% of the world's food is generated from only twelve plants and five animal species.³⁶ Loss of natural diversity, within the food system and in the wider environment, decreases system resilience, making us more vulnerable to climate change.



Lochend Community Growing Project, Edinburgh.
Photo by Mihaela Bodlovic for Edible Edinburgh.

³³ Centre for Ecology and Hydrology (2015), Nitrogen on the Table: The influence of food choices on nitrogen emissions and the European environment, available at: http://www.pbl.nl/sites/default/files/cms/publicaties/Nitrogen_on_the_Table_Report_WEB.pdf

³⁴ RSPB (2013), State of Nature Report, available at: https://www.rspb.org.uk/Images/stateofnature_tcm9-345839.pdf

³⁵ Marine Scotland (2013), Scotland's Marine Atlas, available at: <http://scotgov.publishingthefuture.info/publication/marine-atlas>

³⁶ FAO (1999), 'What is happening to agrobiodiversity?' available at: <http://www.fao.org/docrep/007/y5609e/y5609e02.htm>



Pigs at Whitmuir Organic Farm, photo by Graham Hamilton.

Only 2.4% of farmland in Scotland was managed organically in 2014.³⁷ Agrochemicals, manufactured from fossil fuels, and routinely used in non-organic farming systems, are linked to declines in populations of pollinators such as bees,³⁸ as well as the degradation of our soil and the pollution of our water. Deteriorating soil quality not only limits our capacity to grow food, it also makes us more vulnerable to floods.³⁹

Reliance on inputs for our crops is matched by unsustainable practices in our livestock production. 75% of the protein we feed our livestock in the EU is imported, with significant social and environmental consequences for the countries who grow it. An increasing number of Scottish livestock are being kept entirely indoors, in the name of productivity – even though we have vast amounts of land only suitable for grazing. This intensive meat production, where animals are kept together in confined spaces, makes animals more vulnerable to disease and requires routine antibiotic use.

It is estimated that about 45% of all antibiotics used in the UK are given to farm animals, including antibiotics that are critically important in human medicine.⁴⁰ The WHO has consistently warned of the dangers of rising antibiotic resistance around the globe, outlining the possibility of a post-antibiotic era in the 21st century.⁴¹

‘As well as increased mortality, antibiotic resistance results in more severe illness, longer duration of illness, more bloodstream infections and more hospitalisation. The additional cost per patient of antibiotic resistance varies significantly, but has been put as high as £30,000.’⁴²

Aside from the implications for human health, intensive animal farming is also a moral issue. Globally, around two-thirds of farm animals are factory farmed, amounting to nearly 50 billion animals. They are crammed together without access to natural light, preventing normal behaviours.

Eating less and better quality meat is essential for our health, global food security, and tackling climate change. One-third of the calories produced worldwide, and half of all plant protein, is fed to animals.⁴³ On this scale, feed for animals is competing with human food needs. The global cropland footprint associated with the UK food and feed supply increased by 2022 kha (+23%) from 1986 to 2009.⁴⁴ The UK is outsourcing the environmental impacts of our eating habits.

The dominant mantra in food system governance in recent decades has been to *increase production*; however, globally around a third of all food is wasted, at all stages of the supply chain. In Scotland 630,000 tonnes of food and drink is thrown away from our homes each year, costing us over £1 billion, or £470 for the average household.⁴⁵

³⁷ Scottish Government (2014), Organic Farming Statistics, available at: <http://www.gov.scot/Publications/2015/06/3129>

³⁸ David, A, Botías c, et al (2016): Widespread contamination of wildflower and bee-collected pollen with complex mixtures of neonicotinoids and fungicides’, Environmental International, available at: <http://www.soilassociation.org/news/newstory/articleid/8703/-new-research-exposes-secret-cocktail-of-toxic-pesticides-in-hedgerows-and-wildflowers>

³⁹ Dobbie, K E, Bruneau, P M C and Towers, W (eds) (2011), The State of Scotland’s Soil. Natural Scotland, available at: <http://www.sepa.org.uk/media/138741/state-of-soil-report-final.pdf>

⁴⁰ Alliance to Save Our Antibiotics (2015), Antimicrobial resistance - why the irresponsible use of antibiotics in agriculture must stop, available at: <http://www.ciwf.org.uk/media/7247793/antibiotics-alliance-40pp-report-2015.pdf>

⁴¹ World Health Organisation (2015), Antimicrobial resistance, available at: <http://www.who.int/mediacentre/factsheets/fs194/en/>

⁴² Smith R and Coast J, (2013), The true cost of antimicrobial resistance, British Medical Journal, available at: www.bmj.com/content/346/bmj.f1493.pdf%2Bhtml

⁴³ Cassidy E, West P, Gerber J, and Foley J, (2013), Redefining agricultural yields: from tonnes to people nourished per hectare, available at: <http://iopscience.iop.org/article/10.1088/1748-9326/8/3/034015/pdf>

⁴⁴ Ruiter H, Macdiarmid J, Matthews R, Kastner T, Smith P, Global cropland and greenhouse gas impacts of UK food supply are increasingly located overseas, available at: <http://www.farmingfutures.org.uk/blog/global-cropland-and-greenhouse-gas-impacts-uk-food-supply-are-increasingly-located-overseas>

⁴⁵ Zero Waste Scotland, Love Food Hate Waste, available at: <http://scotland.lovefoodhatewaste.com/content/about-food-waste-0>

CASE STUDY: backing organic and leading the way in agroecology – lessons from Europe

Backing organic

We know organic systems work for nature and people; some countries have recognised this and made active decisions to support organic food and farming, and it is encouraging to see the Scottish Government supporting an organic action plan (Organic Ambitions 2016-2020).

Denmark is a world leading organic nation with the highest global market share for organic food and an ambitious target to double the size of Danish land that is farmed organically to 15% by 2020.⁴⁶ The Danish appetite for organic food has not happened by chance. The government recognises the huge market role that cities and towns play in increasing sustainable food production, and consequently have invested in initiatives that encourage and support Danish consumers, retailers and large public catering services to buy more organic food. The Danish Government has put increasing public procurement of organic food firmly at the forefront of its new Organic Action Plan.

Sweden, France and The Netherlands are just some of the other European countries that have set national organic public procurement targets as a key policy driver for increasing sustainable food production and demanding and delivering environmental, economic and social objectives.

The Scandinavian cities of Copenhagen and Malmö have gone a step further, using ambitious organic food procurement targets to help meet city-wide sustainable development and social justice goals for fairer, greener and healthier living. Around 90% of the food served in Copenhagen's public kitchens is organic.⁴⁷ Increasing organic consumption is a key action to support the city's ambition to become the world's first carbon neutral capital by 2025.

Leading the way in agroecology

In September 2014 France adopted a new law on the Future of Agriculture, Food and Forestry. The law promotes agroecology as the farming method for the future. It states that trade relationships

should be grounded in food sovereignty principles and that short supply chains, local and seasonal produce and especially organic production are necessary to achieve food safety and healthy diets. France is aiming to become a leader in agroecology and recognises that this depends on mainstreaming public policies towards this goal. Time will tell how effective this law is in embedding agroecology as the dominant agricultural model, but at the very least it is a bold statement of a desired new direction.

Next steps for Scotland

There is an urgent need to reduce the environmental impacts of our food system and begin to move towards more sustainable models of food production and consumption. To help us get there, the Scottish Government should:

1. Establish agroecology as the underlying principle of farming in Scotland, and set out a programme to transform farmer education, training, advice and research accordingly.
2. Champion a reform of the Common Agricultural Policy⁴⁸ that supports and develops truly sustainable production, directing money to where it delivers most for Scottish citizens in terms of our environment and the food we eat.
3. Ensure more effective implementation and enforcement of existing environmental legislation throughout the food supply chain in order to reduce impacts.
4. Take a whole system approach to reducing the impact of our food on the climate, measuring consumption as well as production emissions and setting ambitious targets for reducing them.

⁴⁶ Soil Association, (2013), Organic food and farming: a driver for sustainable development in Scotland with learning from Denmark, available at: <http://www.soilassociation.org/LinkClick.aspx?fileticket=3JrEn2Saxxg%3d&tabid=313>

⁴⁷ Eurocities, (2015), Copenhagen House of Food, available at: <https://eurocities2015.kk.dk/sites/eurocities2015.kk.dk/files/uploaded-files/copenhagenhouseoffood.pdf>

⁴⁸ See glossary for more information on the Common Agricultural Policy.

3

IT'S ABOUT MORE THAN FOOD



Culture Kitchen, a project by The Hidden Gardens, Glasgow. Photo by Arpita Shah.

What we eat, and how much of it, are critical determinants of our health. The 'Scottish diet' has won no accolades and there is a general consensus that the food habits of Scottish citizens need to change, and quickly. But food is about a lot more than calories: we know that food can nourish us in so many more ways than simply the physiological. Improving our food culture and engaging more with the food we eat can have wide ranging benefits.

Our hope and expectation

Our food system nourishes people; giving everybody in Scotland the opportunity to lead the lives they want to lead. But it's also more than that. It is a space for creativity and connection: food is a source of happiness, not just sustenance.

There is a thriving Scottish food culture, with the new Scottish diet including more seasonal fruit and vegetables, limited high-sugar foods and a 'less and better' approach to meat and dairy. Rich in complex carbohydrates, vitamins and minerals, it enables more active lifestyles. Good physical health is important for good mental health and vice versa. The food we eat keeps us moving physically, but also sustains our mental development and wellbeing.

Little by little we are changing from identifying as food consumers to food citizens. We see ourselves as worth looking after and join with others to take more control over what we eat, grow and buy. As we take back control of our food, recognising its value – not just for our health and wellbeing, but also for our culture, economy and community cohesion – it is no longer treated as purely a commodity to be bought and traded on the global market.

More people have opportunities to produce food with greater numbers of young people, women and ethnic minorities involved. Crofting is thriving; new crofts and better support for affordable croft housing has boosted rural economies and communities. More people are growing food in towns and cities. Allotments, community gardens, and community-supported agriculture provide increasing opportunities to experiment with new crops for Scotland as well as reviving heritage varieties of fruits, vegetables and grains. They make a meaningful contribution to our overall food production, and stimulate an inclusive and exciting culture around food.

Community-based food projects are supported through government policies and play an important role in developing knowledge and skills for living a healthy lifestyle, as well as improving local connections and support mechanisms, and facilitating involvement of those generally excluded from society into community networks. There are more and more places for people to interact with food and develop friendships outside of the home and private businesses. We eat more meals together.

The community food economy is providing new and secure occupational roles and enjoyable jobs. Investment in our food culture is seen as valuable, in the same way as investing in the arts, with farmers markets, local food businesses and creative food endeavours being supported financially. There is greater interest in our food heritage, as well as a sense of how our evolving food culture reflects the diversity of our population.

Everybody has access to good, healthy food; we live in a new-normal, where it is easy to get local vegetables, fruit, and grains – rather than them being a niche market for the dedicated. We are not bombarded with advertising by companies selling processed, unhealthy, calorie-dense foods, and everybody enjoys more autonomy with what they eat.

Every school has a growing project, in addition to regular trips to their local farm. Children become food literate at an early age and are aware of the consequences of the food choices they make. They learn about soils and seas and enjoy growing and cooking food as part of the curriculum.

Public food reflects public values; food in schools, hospitals, and care homes across Scotland is produced by environment-friendly farming, fishing and aquaculture, with direct links between producers and public sector kitchens and a decent price guaranteed to the producer. Similarly, when we eat out in Scotland, we know the food has been produced to high ethical and environmental standards.

The case for change

When talking about healthy diets, we must move beyond a narrow focus on individual choice. Education will have a very limited impact whilst there are so many factors pushing behaviour in the opposite direction.

Today a healthy diet is financially inaccessible for many in Scotland.⁴⁹ Unable to afford healthy foods – or the fuel or equipment to cook and store them – low-income households consume more highly-processed, calorie-dense foods which are high in sugar, fat and salt, and are often heavily marketed towards such groups.⁵⁰ Consequently, people on low incomes face the double burden of poverty and illness.

58% of food advertising is on confectionary and convenience food and it is reaching people through multiple channels, including public spaces. The number of eating-out sites has increased by 53% in the last 10 years; the ubiquity of fast food outlets and low-nutrition food means that it has become more and more difficult to make good food choices.⁵¹

Multiple retailers and caterers create our collective food environment, providing us with the bulk of our shopping and most of our meals outside the home. This power comes with a responsibility to help all of us reach the nutritional standards we've set for our nation: it is impossible for us to meet these standards in our diet unless they match what is sold in the shops and restaurants we use.

Whilst corporations can make big profits from dominating the food market with unhealthy food, the consequences are paid for with public money. In Scotland, around two thirds of adults and 33% of children are either overweight or obese,⁵² the total societal cost is estimated to be between £0.9 billion and £4.6 billion, with the NHS cost contributing around £363 million. At a UK level, McKinsey has recently estimated that tackling the obesity crisis could deliver economic benefits worth £17 billion per year.⁵⁴

Overall, scientists estimate that about a third (32%) of 13 of the most common cancers in the UK could be prevented through improved diet, physical activity and body weight. For certain cancers, such as bowel and breast cancer this figure goes up to 47% and 38% respectively.⁵⁵

Every day 48 people in Scotland are diagnosed as having diabetes. Associated with this condition are risks such as blindness, kidney disease, amputation, stroke and a reduction in life expectancy. Almost 5% of the population in Scotland have developed, or are at high risk of developing, diabetes (90% of which is type 2).⁵⁶

Imbalanced nutrient supply during pregnancy and early childhood may alter body structure and function in a way that increases risk of chronic disease and, in girls, may modify the ability to meet the nutritional needs and other stresses associated with reproduction. The nutritional status of the population today therefore has implications for the health of both current and future generations.⁵⁷

In 1996 the government in Scotland formulated Scottish Dietary Targets (SDTs) to tackle the prevalence of diet-related disease; however, two decades on and none of the SDTs have been met.⁵⁸ The Food Standards Scotland agency is now taking a promising new approach, recognising that changing our diets requires some substantial changes to our food environment, which go beyond voluntary action from the food industry.⁵⁹

With food production far away from cities, and few people visiting farms, there is a growing disconnect between us, our food and how it is produced. Intensive farming has normalised the suffering of animals and extensive environmental degradation – neither of which are seen by the time the food gets to our plates. Furthermore, an increasing proportion of our dietary energy – 64% for children and 58% for adults – is formed of ultra-processed foods, which might bear little resemblance to anything that grows in a field.⁶⁰

⁴⁹ Douglas F, Ejebu O, Garcia A, MacKenzie F, Whybrow S, McKenzie L, Ludbrook A, and Dowler E (2015), The Nature and Extent of Food Poverty/Insecurity in Scotland, available at: www.healthscotland.com/documents/25717.aspx

⁵⁰ Fabian Commission (2015), Hungry for Change, available at: <http://www.fabians.org.uk/wp-content/uploads/2015/10/Hungry-for-Change-web-27.10.pdf>

⁵¹ Food Foundation (2016), Force-fed, available at: <http://foodfoundation.org.uk/wp-content/uploads/2016/01/The-Food-Foundation-64pp-A4-Landscape-Brochure-AW-V32.pdf>

⁵² Scottish Government (2015), Scottish Health Survey Report, available at: <http://www.gov.scot/Topics/Statistics/Browse/Health/TrendObesity>

⁵³ Scottish Public Health Network (2015), Review of the Obesity Route Map, available at: http://www.scotphn.net/wp-content/uploads/2015/12/2015_11_13-Final-Report.pdf

⁵⁴ McKinsey Global Institute (2014), Overcoming obesity: An initial economic analysis

⁵⁵ World Cancer Research Fund (2013), Cancer preventability statistics, available at: <http://www.wcrf-uk.org/uk/preventing-cancer/cancer-preventability-statistics>

⁵⁶ Diabetes Scotland (2014), Impact Report, available at: https://www.diabetes.org.uk/Upload/Scotland/Scotland%20Annual%20Report%20FINAL%20for%20web%2018_8_15%20SR.pdf

⁵⁷ Scientific Advisory Committee on Nutrition (2013), The influence on maternal, foetal and child nutrition on the development of chronic disease in later life, available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/339325/SACN_Early_Life_Nutrition_Report.pdf

⁵⁸ Food Standards Scotland (2015), The Scottish Diet: It needs to change. Available at: <http://www.foodstandards.gov.scot/sites/default/files/Situation%20Report%20-%20COMPLETE%20AND%20FINAL.pdf>

⁵⁹ Food Standards Scotland (2016), Board Meeting: Diet and Nutrition, proposals for setting the direction for the Scottish Diet.

⁶⁰ The Food Foundation (2016), Force-fed, available at: <http://foodfoundation.org.uk/wp-content/uploads/2016/01/The-Food-Foundation-64pp-A4-Landscape-Brochure-AW-V32.pdf>

We are still discovering the possible health impacts of pesticides which have now become commonplace in food production. The World Health Organisation (WHO) recently re-classified glyphosate, the most widespread herbicide worldwide, as a probable human carcinogen, after this chemical has been in use for many decades.⁶¹

Despite interest in improving nutrition and sustainability in public service catering, there is still a lot of work to do to ensure meals in hospitals, prisons and care homes are nutritious and sustainably sourced. This is, at least in part, due to the significant cuts made to public sector catering budgets in recent years. This increases the workload and pressure on staff and undermines positive work being done.⁶² The true cost of food for society includes its impact on public health and the environment, costs that all of us pay with our taxes.

CASE STUDY

New Nordic Food

*Scotland could be more like the Nordic Countries and amend the National Dietary Guidelines to include references to sustainability and food culture, and work together with people from across the food sector to change how we do food in Scotland.*⁶³



The idea for 'the New Nordic Kitchen' has been developing since 2004: food produced with care and with a focus on taste and diversity, forgotten varieties and breeds, old processing methods and new ideas in the kitchen. It aims to be democratic rather than elitist. One of the basic ideas was to involve as many people as possible in the work of defining Nordic cuisine and its ambitions. Farmers, food producers, politicians, home economics teachers, government officials, food scientists, gourmet chefs and consumers have all contributed to the development of the New Nordic Kitchen Manifesto.

Since 2005, the Nordic Council of Ministers for Fisheries and Aquaculture, Agriculture, Food and Forestry has been supporting various programmes building on the ideas in the manifesto. This included initiatives to bring the vision of a New Nordic cuisine into homes and institutions, strengthen children's food culture, and encourage innovative product development, local food production and branding.

Next steps for Scotland

Scotland needs to change its unhelpful attitude to food. Eating a healthy diet must become commonplace and good food should be at the heart of our culture and society. To help us get there, the Scottish Government and local authorities should:

1. Lead by example, with all food purchased with public money and served in the public sector, being nutritionally balanced and sustainably sourced.
2. Introduce a retailers and caterer's levy, which would require operators of multiple outlets to report periodically on the nutritional composition of their sales and pay a levy on the difference between their sales and the national nutritional targets. For example, if the added sugar across the board of Supermarket A is 14% (current average) it would pay the levy on the difference between this and the target (5%). Similar levies could be paid on the excess of saturated fat or the shortfall in fibre.
3. Support community food initiatives, helping to provide access to resources such as land, as well as training and development opportunities. Such initiatives should be helpful to expand their reach and deliver community based learning, as well as provide spaces to come together around food and enjoy meals with company.
4. Develop 'whole school food plans' which connect the curriculum with catering and the community, link schools with local farms and embed food into teacher education on sustainability.

⁶¹ World Health Organisation (2015), IARC Monographs Volume 112: Evaluation of five organophosphate insecticides and herbicides, available at: <http://www.iarc.fr/en/media-centre/iarcnews/pdf/MonographVolume112.pdf>

⁶² Unison Scotland (2013), Food for Good Charter, available at: http://www.unison-scotland.org.uk/briefings/b041_BargainingBrief_Food4GoodCharter_Oct2013.pdf

⁶³ New Nordic Food, available at: <http://www.norden.org/en/theme/ny-nordisk-mad>

4

SHORT SUPPLY CHAINS GO FURTHER



John Kelly, grower at Left Field market garden on the edge of Glasgow, delivering produce to Locavore's shop. Photo by Clem Sandison.

Our current models of food production, distribution and supply are increasingly large scale and industrialised. Fewer and fewer individuals benefit economically from this system while many of us bear its social and environmental costs. Increasingly, we lack connection to our food. Relatively few people are engaged directly in producing or harvesting food and the majority of us are largely ignorant of the practices and processes by which food comes to our plate. Our food system could be very different with significant benefits for all.

Our hope and expectation

Shortening food chains has gone a long way in creating a fair and sustainable food system. Reducing the number of steps between those who produce food, and those who eat it has benefits for our environment, economy and society.

Our food system encourages involvement from citizens. New financial models underpin short food chains, with community-supported agriculture, collective ownership schemes and involvement from government and local authorities all enabling access to land, investment and support for a thriving local food system. This collaborative approach means we produce more of what we eat in Scotland and eat more of what we produce.

There are more people working on the land, as well as right-sized processing and retail: jobs are creative, engaging, and with opportunities for development. Networks of local food outlets, local processing infrastructure and community-buying schemes reduce risk for farmers who previously had to rely on supermarket contracts.

Not everyone has an interest in producing food, but those who choose to work and spend leisure time in other ways are still able to know what they eat. Short food chains allow transparent relationships between producers and consumers; fitting food into busy schedules no longer has to compromise our health or the environment.

Short food chains do not mean that Scottish people are surviving on roots all winter, or giving up coffee and chocolate. Local food forms a much bigger portion of our diet, but mutually beneficial trade also plays a significant role. The trade system has

been reoriented so that producers of all kinds of products across the globe can earn a fair reward for their labour in an environmentally sustainable and ecologically sensitive way. A proliferation of cooperatives and other small-scale food businesses, with direct relationships with producers, supply the Scottish market.

Despite precarious growing conditions, as climate change results in increasingly unpredictable weather across the world, food is not subject to the same level of price shocks as have been witnessed in recent years. No longer just another commodity to be speculated on, our food system is structured by people for people and is free from the interference of financial speculation.⁶⁴



Slow Food Youth Network eat-in on the Royal Mile, photo by Mihaela Bodlovic for Edible Edinburgh.

⁶⁴ Global Justice Now (2010), The Great Hunger Lottery, how banking speculation causes food crises, available at: http://www.globaljustice.org.uk/sites/default/files/files/resources/hunger_lottery_report_6.10.pdf

The case for change

The food system in the 21st century is characterised by long and complex supply chains, and a concentration of power and ownership. Only 500 companies supply 70% of the food chain, and only seven form 90% of the agro-chemical and seed industries.⁶⁵

In such a concentrated industry, there is a distinct lack of democracy, transparency and accountability. Almost half of global food manufacturers admit that they don't have any visibility beyond their direct supplier.⁶⁶

The oligopoly in our food system means that while there are few people making the decisions, many of us are eating the consequences. We consume food made with unseen extras such as antibiotics and chemicals, produced and processed in conditions we wouldn't accept for ourselves, and most of the time we don't know it.

One off investigations, such as that carried out by the Guardian in 2014 on slave labour in the prawn trade,⁶⁷ have resulted in increased awareness about the exploitative conditions in our supply chains and in some cases provoked action from retailers.⁶⁸

Similarly, sporadically there is public uproar over the contamination and misrepresentation of foodstuffs. The horsemeat scandal in 2013 is one example of a widespread problem. Those with cultural, religious, and allergy reasons for not eating certain foods have suffered from the complexity of supply chains and lack of transparency, with pork recently being found in Cadbury chocolate⁶⁹ and nuts being used to replace cumin seeds.⁷⁰

The system of complex supply chains and concentrated ownership not only has severe implications for our health, food security and environmental sustainability into the future, it is also damaging for our economy.

Every £10 spent in a supermarket leads to only £2.54 being spent in the local area. By comparison,

spending £10 in a local food outlet is actually worth £25 to the local economy, as it gets re-spent locally several times.⁷¹

Independent and community retailers employ three times as many people per unit of turnover than the big supermarkets;⁷² localising our food system infrastructure is essential if we're serious about more and better jobs into the future.

Just as there are a few companies controlling most of the food sector in Scotland, so there are a few individuals and families owning most of the land. The inaccessibility of land has proved to be an insurmountable obstacle for many in Scotland with ambitions to farm.

Tenant farmers – who represent 20% of the sector – have fewer rights than other tenants; they may face the possibility of eviction without explanation or compensation. This system discourages long-term investment in the land such as planting trees.

With a few big supermarkets dominating the retail market and dictating prices to producers, it is becoming extremely difficult to make a decent livelihood from farming. To produce a four pint bottle of milk, it costs the average farmer 62 pence; however they are only paid 48 pence by the retailers, who then sell the bottle for 94 pence. Farmers are running at a loss, so that supermarkets can make greater profits – and only stay in business through subsidies from the taxpayer.

With so many barriers to entry, and difficulties making a living, farming is not an attractive career option. Currently the average age of a farmer is 58, and rising. Many do not have a succession plan in place.⁷³

Distortion in the food market does not only come from the oligopoly of retailers; a globalised food system can exacerbate price spikes due to financial speculation.

⁶⁵ Oxfam (2013), Behind the Brands, available at: <https://www.oxfam.org/sites/www.oxfam.org/files/bp166-behind-the-brands-260213-en.pdf>

⁶⁶ The Guardian (2015), From trough to table: mapping the food chain saves lives, available at: <http://www.theguardian.com/sustainable-business/2015/jan/16/trough-table-mapping-food-supply-chain>

⁶⁷ The Guardian (2014), Asian slave labour producing prawns for supermarkets in US, UK, available at: <http://www.theguardian.com/global-development/2014/jun/10/supermarket-prawns-thailand-produced-slave-labour>

⁶⁸ The Guardian (2015), Costco and CP Foods face lawsuit over alleged slavery in prawn supply chain, available at: <http://www.theguardian.com/global-development/2015/aug/19/costco-cp-foods-lawsuit-alleged-slavery-prawn-supply-chain>

⁶⁹ The Guardian (2014), Pork in Cadbury's: Malaysian chocolate recalled after DNA traces found, available at: <http://www.theguardian.com/business/2014/may/28/pork-in-cadburys-malaysian-chocolate-recalled-after-dna-traces-found>

⁷⁰ The Independent (2015), New food scandal over peanuts is 'more serious' than the horsemeat crisis, available at: <http://www.independent.co.uk/life-style/food-and-drink/news/new-food-scandal-over-peanuts-is-more-serious-than-the-horsemeat-crisis-10045725.html>

⁷¹ New Economics Foundation (2002), The Money Trail: Measuring your impact on the local economy using LM3, available at: http://b.3cdn.net/nefoundation/7c0985cd522f66fb75_o0m6boezu.pdf

⁷² Campaign to Protect Rural England (2012), From field to fork: The Value of England's local food webs, available at: <http://www.cpre.org.uk/resources/farming-and-food/local-foods/item/2897-from-field-to-fork>

⁷³ Scotland's Rural College, New Entrants, available at: http://www.sruc.ac.uk/info/120389/new_entrants

CASE STUDY

We could be more like France and create the opportunities for people to get on to the land who are interested in looking after the environment and producing food for people.

Terre de Liens is a civil society organisation, created in 2003, that removes land from the commodity market and lets it to farmers who undertake to farm organically or are peasant farmers committed to respecting the environment.⁷⁴

Land prices are high and the land market so competitive that access to land has become a major barrier for new entrants. To acquire farmland, Terre de liens has created two financial tools: la Foncière, a solidarity investment company; and le Fonds, an Endowment Trust which collects investment or donations in cash or kind. They have found people are ready to invest with no other ROI – Return on Investment – than better food, landscape, biodiversity, environment, and meaningful jobs.

By owning 71 farms (65 in the Fonciere and 6 in the Fund) amounting to 1900 hectares of land, Terre de liens is already fulfilling its goal of keeping land in sustainable agricultural use. Although marginal when compared with the French utilised agricultural area, it is a strong sign that, if given a chance, large numbers of citizens support the development of local sustainable agriculture and are happy to have their say in land planning and management.

More recently this civic approach to a better food system has been supported by France's 2014 law on the Future of Agriculture, Food and Forestry, as mentioned earlier. This law marks a new phase in land policy by encouraging the establishment of young farmers and the protection of agricultural land.

⁷⁴ European Initiatives on Access to Land (2012), Terre de Liens, available at: http://www.nourishscotland.org/wp-content/uploads/2014/06/Exp1_Terredeliens.pdf

Next steps for Scotland

Our current model of food production, distribution and supply isn't benefitting all those it could. An approach based on short-supply chains could do much to help connect people to food, enable more businesses and individuals to benefit economically and socially and create a more transparent food system. To help us get there, the Scottish Government should:

1. Strengthen the powers of the planning system to ensure the vitality and diversity of town centres and safeguard land for growing food, given the competing uses of housing and transport.
2. Invest in regional food economies connecting urban populations with rural producers – including community land ownership and community-connected agriculture.
3. Make prime spots available in town and city centres to facilitate farmers markets, drop-off points for buying groups and other models for supporting and facilitating short food chains.



Home-made jams, chutneys, and cordials from the Edinburgh Larder, photo by Mihaela Bodlovic for Edible Edinburgh.

Getting there

So far, we have highlighted areas where we believe the Scottish Government should take action. But, everyone has a part to play in getting us from where we are now, to where we want to be. Individuals, producers, civil society, businesses and Government all need to act, and act with urgency and purpose.

Change is necessary and possible, but to take this opportunity to really transform the system, and make our economy, environment and society resilient in the face of such challenges, will require coordination, strategy and ambition.

The Scottish Government and its agencies and local authorities must facilitate a radically different food environment, leading the way on progressive, joined-up policies and creating, with us, a food system in which we are all empowered to take a more active role. Moving from being passive food consumers to active food citizens has huge potential to make us happier, as well as healthier, but we need some new thinking to make the transition.

We need change in the following areas:

Greater policy co-ordination and coherence

Improving our food system requires better integration of Government policy across a range of areas, including health, agriculture, public procurement, welfare, education and others.

A joined-up approach is the only way we are going to address social and environmental challenges effectively in the long-term.

To drive this forward we are calling for primary legislation that enshrines the Right to Food in Scottish law, promotes agroecology as the farming method of the future, and creates a statutory Food Commission to provide oversight and scrutiny of our food system and report on it annually to Parliament. The Food Commission would be obliged to consult with civil society, and be able to commission research, issue advice and work with all relevant agencies to assist in the transition to a better food system.

Government, its agencies and all public bodies to drive up standards, 'demonstrate by doing' and lead the way to better food systems

The Government has repeatedly stated its commitment to delivering social justice in Scotland, and set a number of ambitious targets on greenhouse gas emissions, biodiversity, and public health. However, these targets will continue to be missed until our actions are more consistent with our ambitions.

Public procurement should drive up social and environmental standards across the board. Government should be signaling support for companies who pay the living wage, and regulate those with poor employment practices such as zero hour contracts and breaches in health and safety laws. Public procurement should provide a secure market for agroecological food production, with a strong commitment to all food served in public services being healthy and nutritious.

A more democratic and inclusive food system

More of us need to be involved in order to make this transition to a better food system. This means improved access to land and resources for all who want to grow food, more small businesses able to make a sustainable livelihood, research and knowledge made more widely available, and people having more say over policy making and delivery.

We need to draw on people's knowledge and experience, particularly from those with lived experience of food insecurity and its consequences, to ensure that changes to our food system are part of stimulating bigger changes to our society.



Learning to build a polytunnel as part of Nourish Scotland's New Farmer Programme. Photo by Sally Darbyshire.

A new 'sustainable development' approach throughout the food chain

We all need to work together to make this transition in the food system. Government and local authorities need to ensure that the planning system supports short food chains. Food businesses should collaborate to promote awareness and access to good food, develop clear labeling, healthy portion sizes and ensure employees are treated fairly. Community groups must play a part in initiatives to shape their local food networks and individuals must engage with what their food choices mean for themselves and others.

People with the knowledge and resources (financial and otherwise) to make good food choices

We need a significant shift in what people eat every day. However, this will come from changes to the food environment – improved access to nutritious food and restrictions on advertising and the ubiquity of unhealthy food – as well as adequate social support and better education on food.

Food education should reach people through multiple avenues. In schools, food should be embedded across the curriculum. GP practices should be linked with community food initiatives so that primary care professionals can signpost individuals to groups that can support them with the resources and skills required to like a healthy diet.

Leading the way and learning from best practice, beyond our borders

The problems cited in this document go beyond Scotland's borders; we have obligations internationally to ensure our food system is fair and sustainable. Currently, our consumption patterns make it harder for the world to feed itself and we are increasingly exporting the environmental impact of what we eat.

Scotland should build on its Fair Trade Nation status with a 'do no harm' food policy, which ensures that the food we import has been produced in ways that are socially and environmentally just, while guaranteeing this for the food we export.

We also need to learn from others and draw on best practice from across the world – where innovative and exciting things are happening to promote socially and environmentally just food systems. Nowhere has cracked it, and Scotland has a real opportunity to lead the way in taking a joined-up approach to these issues and delivering a system which is fair for people today and into the future.



Schools' celebration, Food for Life Scotland, Soil Association. Photo by Mihaela Bodlovic.

Glossary

Agroecology: the science of sustainable farming, it can be defined as “the application of ecology to the management of agricultural systems”.⁷⁵ In this report we take this to include (certified) organic agriculture. Agroecology is also a political movement that aims to improve the way food is grown and processed globally.

Agroforestry: defined as “a dynamic, ecologically based, natural resources management system that, through the integration of trees in farms and in the landscape, diversifies and sustains production for increased social, economic and environmental benefits for land users at all levels”.⁷⁶

Aquaculture: the farming of aquatic organisms: fish, molluscs, crustaceans, aquatic plants, crocodiles, alligators, turtles, and amphibians. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc. It also implies individual or corporate ownership of the stock being cultivated.⁷⁷

Biodiversity: all the millions of different species that live on our planet, as well as the genetic differences within species. It also refers to the multitude of different ecosystems in which species form unique communities interact with one another and the air, water and soil.⁷⁸

CAP: The European Union’s Common Agricultural Policy (CAP) is a complex system of agricultural subsidies and market regulation mechanism that came into force in 1962 and has been developing since. The CAP is the largest policy of the European Union. It accounts for 39% of the EU’s budget and shapes the farming policies of Member States.⁷⁹

Community-supported agriculture / community-connected agriculture: Community-supported agriculture (CSA) is a partnership between farmers and consumers in which the responsibilities, risks

and rewards of farming are shared. Consumers, often described as CSA members, are closely linked to the farm and the production of their food, and provide support that goes beyond a straightforward marketplace exchange of money for goods. This involvement may be through ownership or investment in the farm or business, sharing the costs of production, accepting a share in the harvest or providing labour.⁸⁰

Co-production: the process of active dialogue and engagement between people who use services and those who provide them. It aims to draw on the knowledge and resources of both to develop solutions to problems and improve interaction between citizens and those who serve them.

Embedded energy and water use: the amount used in the entire process of producing, retailing and consuming a product. When it comes to water, it is also sometimes referred to as virtual water, embodied water or shadow water.⁸¹

Factory farming: a method of farming where livestock is raised in confinement in large numbers (and at high density) in a factory-like environment. The aim of factory farming is to produce as much meat, eggs or dairy at the lowest possible cost.⁸²

Food security: This is a common but contested term in food policy. The World Food Summit of 1996 defined food security as existing “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life”.⁸³

Food security is built on three pillars:

Food availability: sufficient quantities of food available on a consistent basis.

Food access: having sufficient resources to obtain appropriate foods for a nutritious diet.

Food use: appropriate use based on knowledge of basic nutrition and care, as well as adequate water and sanitation.

⁷⁵ Lampkin, NH, Pearce, BD, Leake, A R., Creissen, H, Gerrard, C L, Girling, R, Lloyd, S, Padel, S, Smith, J, Smith, L G, Vieweger, A, Wolfe, M S (2015), The role of agroecology in sustainable intensification. LUPG.

⁷⁶ Roshetko J M, Nugraha E, Tukan J C M, Manurung G, Fay C and Van Noordwijk M (2006), Agroforestry for Livelihood Enhancement and Enterprise Development, available at: http://www.fao.org/uploads/media/Agroforestry_for_Livelihood_Enhancement_and_Enterprise_Development.pdf

⁷⁷ CWP Handbook of Fishery Statistical Standards. Section J: AQUACULTURE. CWP Data Collection. In: FAO Fisheries and Aquaculture Department, available at: <http://www.fao.org/fishery/cwp/handbook/J/en>

⁷⁸ Swingland, I R (2001) Encyclopedia of Biodiversity, Academic Press, San Diego. Pg: 377-391.

⁷⁹ Nyssens, C (2015), Briefing: The Common Agricultural Policy, Nourish Scotland, available at: <http://www.nourishscotland.org/wp-content/uploads/2015/09/BRIEFING-CAP.pdf>

⁸⁰ CSA network, What is CSA?, available at: <http://www.communitysupportedagriculture.org.uk/what-is-csa/>

⁸¹ Embedded water in food production, IGD, available at: <http://www.igd.com/Research/Sustainability/Embedded-water-in-food-production/>

⁸² Friends of the Earth (2010), Briefing: Factory Farming’s Hidden Impact, available at: https://www.foe.co.uk/sites/default/files/downloads/factory_farming.pdf

⁸³ Glossary of globalization, trade and health terms: ‘Food security’, available at: <http://www.who.int/trade/glossary/story028/en/>

Food sovereignty: “Food sovereignty is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems”.⁸⁴

The food sovereignty movement is a global alliance of farmers, growers, consumers and activists. The international movement has developed six defining principles or pillars. Food sovereignty:

- focuses on food for people
- values food providers
- localises food systems
- puts control locally
- builds knowledge and skills
- works with nature⁸⁵

Food system(s): We define the food system as the production, marketing, distribution, sale, purchase, preparation and disposal of food, and the consumer practices, resources and institutions involved in these processes.

Marine Protected Areas (MPAs): This is a generic term used worldwide to refer to an area of sea which benefits from a range of levels of protection. However in Scotland we also use it to refer to the sites that will be designated in Scottish waters under the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009.⁸⁶

Organic food: A definition of organic food is food which is produced using environmentally and animal friendly farming methods on organic farms. These methods are legally defined and any food sold as ‘organic’ must be strictly regulated.⁸⁷

Short food chains: Short food chains or short food supply chains (SFSCs) are the chains in which foods are identified by, and traceable to a producer and are characterised by a minimal number of intermediaries.⁸⁸ This often means that food is sold near to where it is produced but in this report we take short food chains to be not exclusively about proximity, but rather about the possibility for a (more) direct relationship between the producer and the consumer, as is the case for e.g. certain fair trade products from the Global South.

Unprocessed/processed/ultra-processed foods: Three categories for describing the degree of processing of foods have been put forward by Dr. Carlos Monteiro from the University of Sao Paulo in Brazil. He suggests that foods be grouped as follows:

1. Unprocessed/minimally processed: those whose nutritional properties are not altered. This would also include products like cheese, which require a transformation from its original ingredients (in this case milk) but does not require the addition of industrially made additives.
2. Processed: culinary or food industry ingredients such as fats, sugars and starches which are depleted of nutrients except for calories. Examples include sweeteners, modified starch, butter, margarine.
3. Ultra-processed: products that combine processed ingredients. Most ultra-processed foods make use of additives including sweeteners, emulsifiers, preservatives, colours and flavours. Examples include crisps and sweets.⁸⁹

⁸⁴ Declaration of the Forum for Food Sovereignty, Nyéléni (2007), available at: <http://www.nyeleni.org/spip.php?article290>

⁸⁵ Nyéléni (2007), Forum for Food Sovereignty Synthesis Report, available at: <http://www.nyeleni.org/IMG/pdf/31Mar2007NyeleniSynthesisReport-en.pdf>

⁸⁶ Save Scottish Seas. Reading room, available at: <http://www.savescottishseas.org/why-we-need-mpas/reading-room/>

⁸⁷ Soil Association, What is Organic?, available at: <http://www.soilassociation.org/whatisorganic>

⁸⁸ Kneafsey, M, Venn, L, Schmutz, U, Balazs, B, Trenchard, L, Eyden-Wood, T, Bos, E, Sutton, G, and Blackett, M (2013), Short Food Supply Chains and Local Food Systems in the EU. A State of Play of their Socio-Economic Characteristics, available at: <http://ftp.jrc.es/EURdoc/JRC80420.pdf>

⁸⁹ Monteiro, C (2010), The big issue is ultra-processing. [Commentary] World Nutrition. Vol: 1, no: 6, pg. 237-269, available at: <http://www.wphna.org/htdocs/downloads/november2010/10-11%20WN%20Comm%20Food%20processing.pdf>

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March 2016