

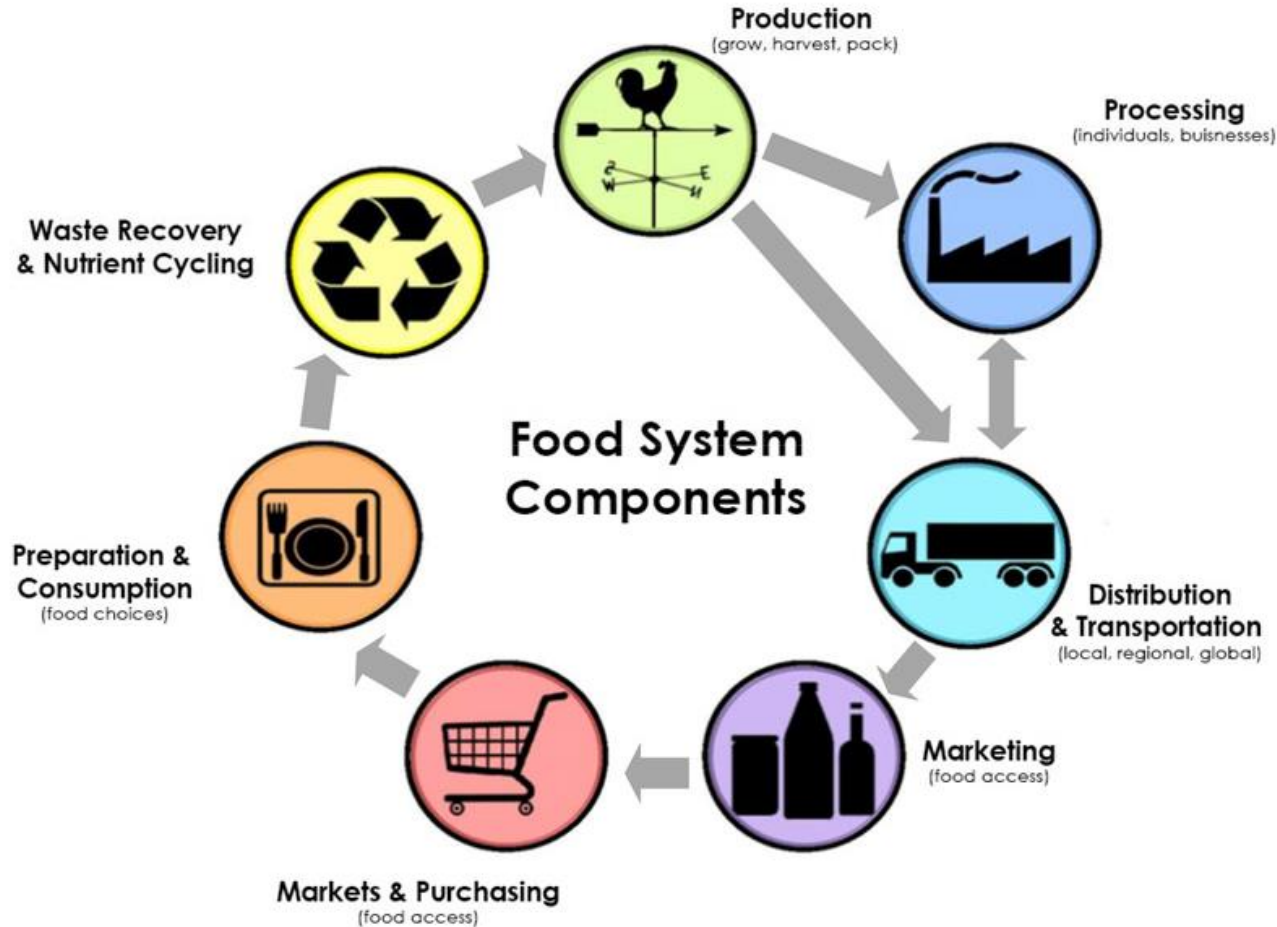


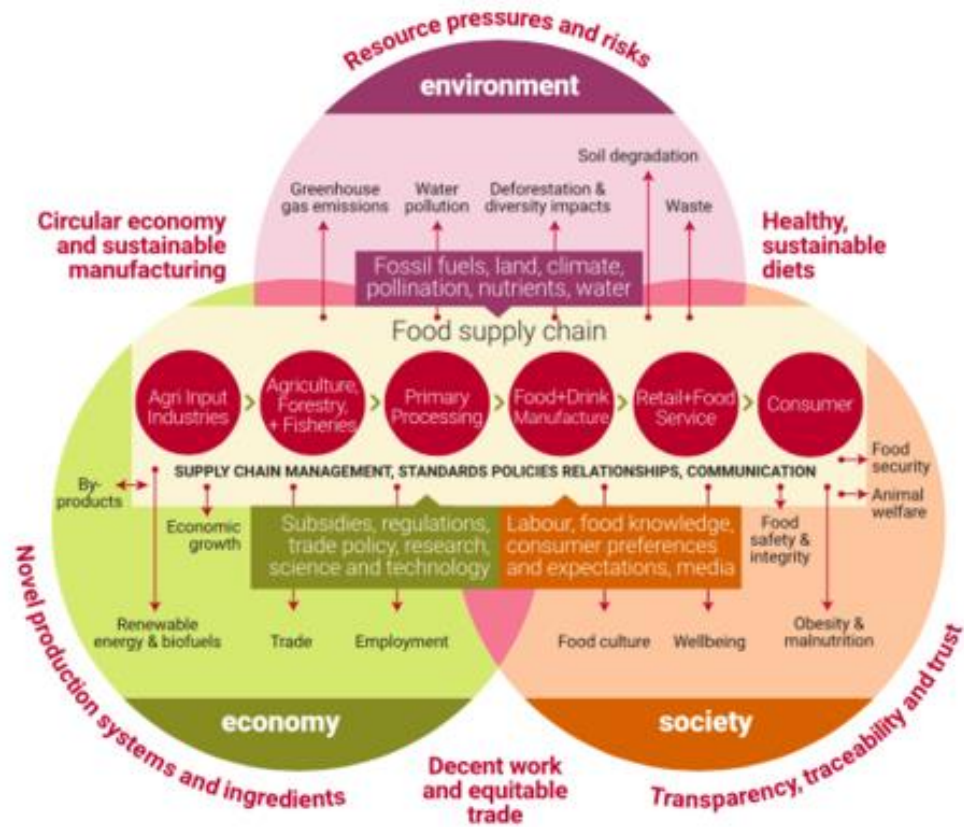
Food Partnerships & the Climate Emergency: Thinking Global, Acting Local

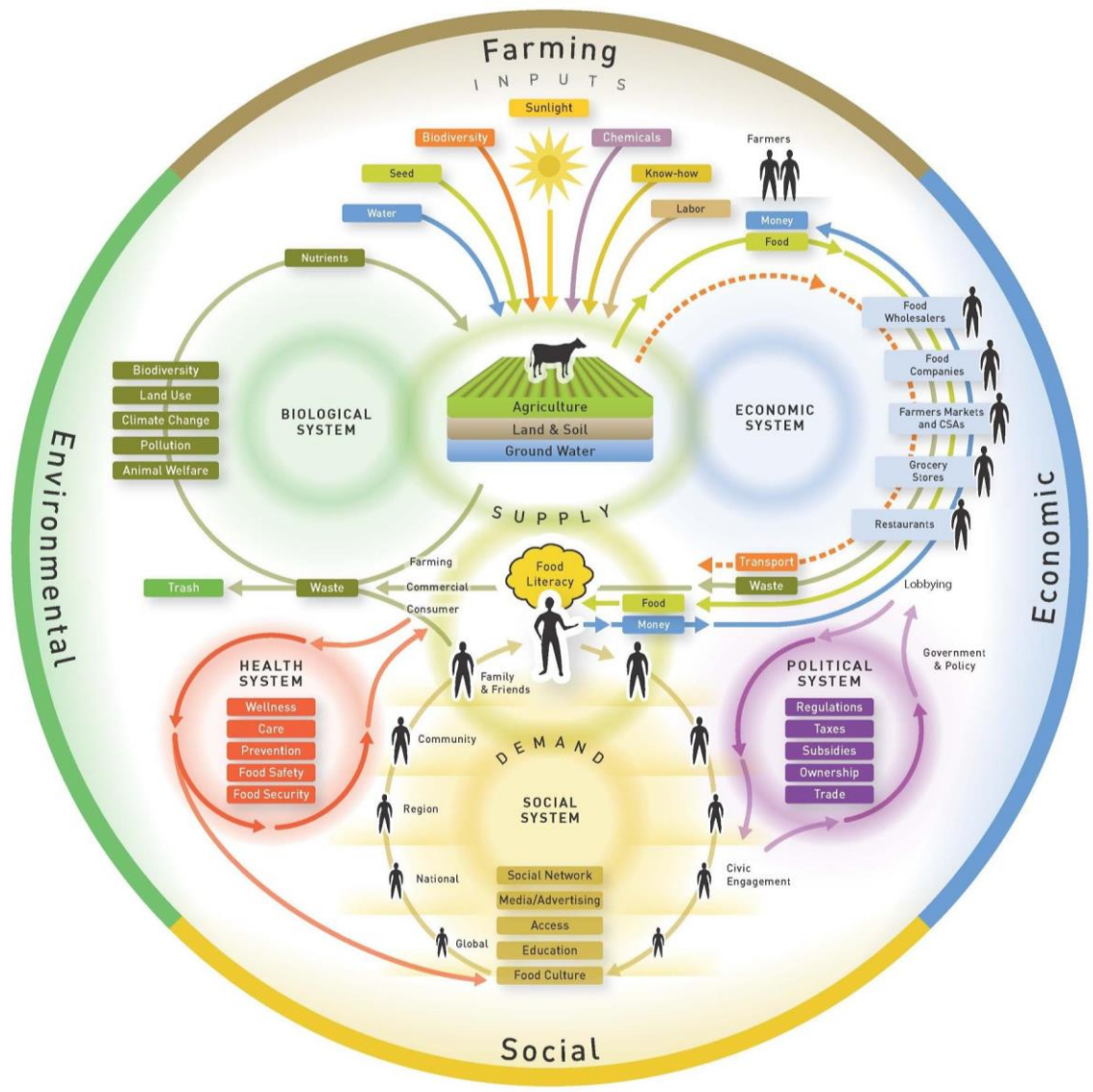
Resource Pack



A food system includes all elements, processes and infrastructure involved in feeding a population: growing, harvesting, processing, packaging, transporting, marketing, consumption, and disposal of food and food-related items. It also includes the inputs needed and outputs generated at each of these steps. There are many ways in which this system can be viewed and mapped...



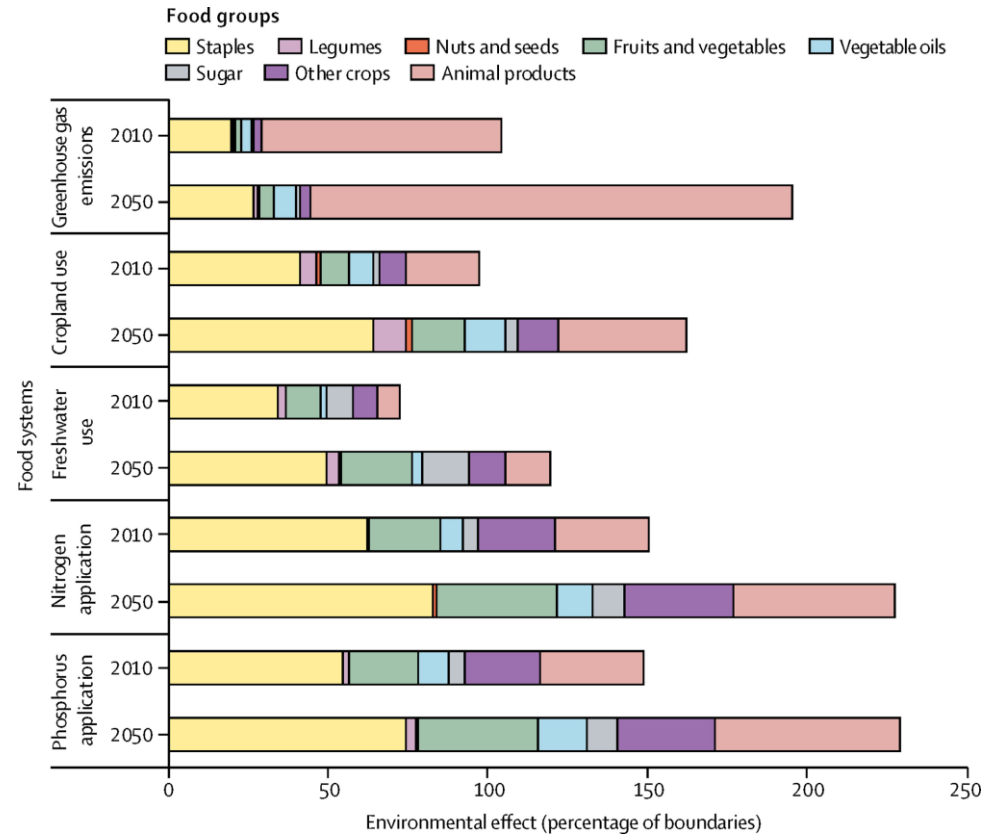
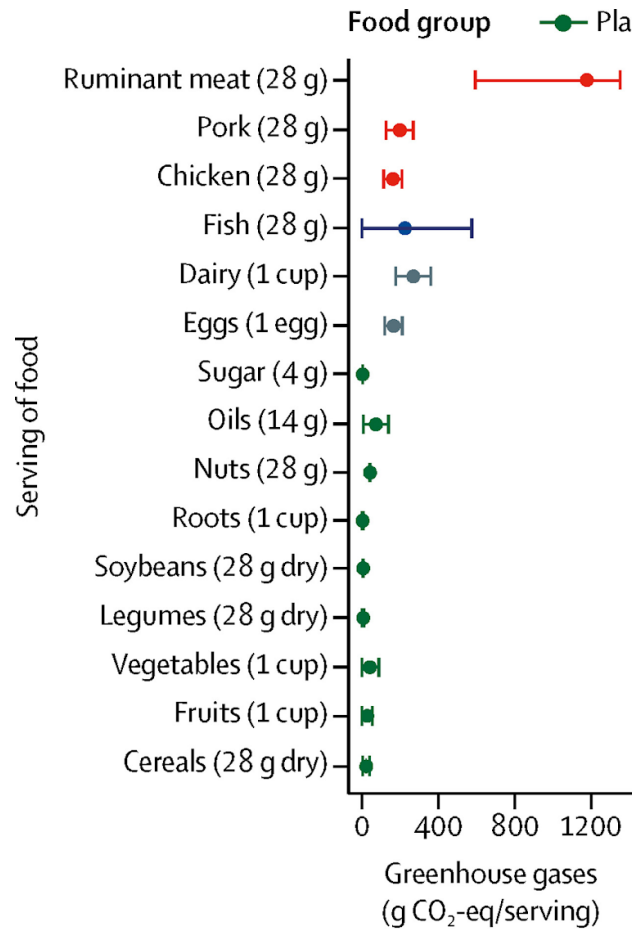




Greenhouse gas emissions from UK food consumption

Our food system is a very significant contributor to greenhouse gas emissions.

- The United Nations Food and Agriculture Organisation (FAO) has calculated that, globally, agriculture generates 30% of total man-made emissions of greenhouse gases, including half of methane emissions and more than half of the emissions of nitrous oxide.
- In the EU, over 30% of the greenhouse gases from consumer purchases come from the food and drink sector.
- Latest conservative estimates from the [Food Climate Research Network](#) in the UK suggest that almost one-fifth of the UK's total greenhouse gas emissions are associated with our food and drink.
- The emissions come not just from the transport of food, but from every stage of the chain – the conversion of land to agricultural use, the energy used to make fertilisers, pesticides and farm machinery, the impact of agriculture on the soil (a natural carbon store), food processing, transport, refrigeration, retail, domestic use of food and waste from all the different stages. These are complex problems with no single solution. A growing body of evidence, however, indicates that emissions from the food sector can be significantly reduced if we were all to shift towards eating:
 - **Less meat and dairy, and more food from plants**
Products from farmed animals – meat and dairy products such as milk and cheese – are among the most energy-intensive and greenhouse-gas intensive food products of all. According to latest figures from the United Nations, animal farming globally causes more greenhouse gas emissions than transport, and the impact is increasing. This is partly due to methane gas from the digestive systems of ruminants (cows and sheep burping), but also due to large areas of forest being cleared to grow grain and beans for livestock (including cows, pigs and chickens) to eat.
 - **Local and seasonal food**
Locally grown and prepared food can cut down on fuel use in 'food miles' and makes it easier to identify and support environmentally benign food production methods. Buying local produce also means that the food is less likely to be associated with the greenhouse gas caused by recent land conversion. Seasonal food need not be imported, does not require energy-intensive conditions such as heated greenhouses, can be produced organically, and reduces the likelihood of energy-intensive methods of storage and transport such as refrigeration and air-freighting.
 - **Food, such as organic, grown without artificial chemical**
Organic production methods are usually less energy-intensive than industrial agriculture. They do not use artificial fertiliser, which takes an enormous amount of energy and water to produce and results in emissions of the powerful greenhouse gas nitrous oxide.



GROWING COMMUNITIES' FOOD ZONES: OUR VISION FOR A BETTER FOOD AND FARMING SYSTEM

How might we reduce the amount of energy, fuel and resources it takes to feed us, while creating jobs and community in urban and rural areas and producing delicious food that is good for us and the planet? The Food Zones looks at how much of which foods we could be sourcing from different zones, starting with the urban areas in which most of us live and applying a kind of 'food subsidiarity' - raising what it is best to raise as close as we can and then moving outwards taking into account the factors shown. On the right: the kind of farms, diet and trading systems we need and on the left the principles and worldviews that underpin it.

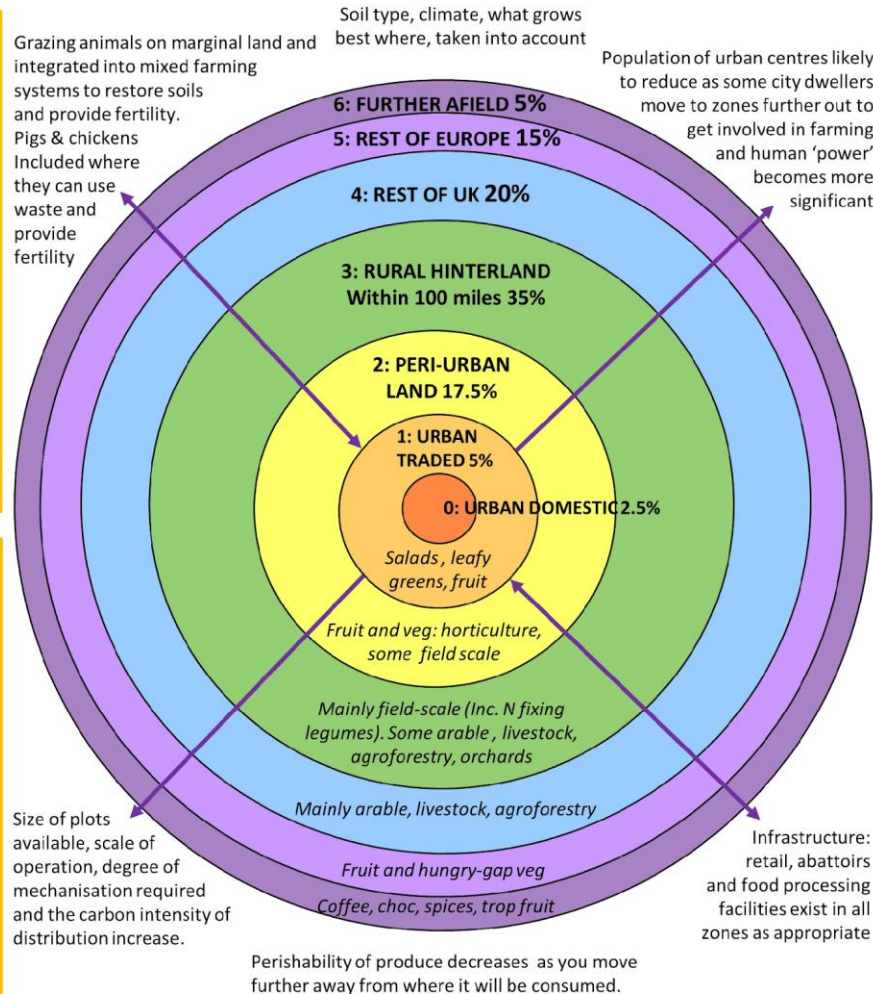
www.growingcommunities.org

PRINCIPLES

- Be mission driven - trading for social purpose, not to maximise profit
- Commit to transparency and cooperation throughout the food supply chain
- Trade fairly
- Champion ecological farming and food production
- Source food sustainably, using the food zones as a framework
- Promote a diet that is good for people and planet
- Operate in a low-carbon way
- Build a strong community in support of this work
- Strive to change the bigger picture

WORLDVIEWS

- Diversity** of solutions operating across multiple scales: balance achieved overall
- Decentralisation** with control and responsibility reclaimed and trading with principles valued over profit
- Productivity** fairly defined, focusing on a whole system view: underpinned by paying farmers a fair price to produce food sustainably
- Limits** acknowledged and standards welcomed: viewed as an invitation to creativity and innovation, not a constraint



SUSTAINABLE DIETS (DEMAND)

- Reflect the seasons and which foods can best be produced where
- Are mainly fresh and minimally processed
- Are mainly plant based
- Minimise waste
- Are aligned with what it is possible to produce sustainably while providing everyone with 'enough'

TRADING & DISTRIBUTION

Values-based Supply Systems (Growing Communities is an example) prioritise local and direct sourcing while encompassing the global – enabling urban growers, rural farmers, larger operations, wholesalers and imports to exist in harmony. **Farms** are connected to the urban communities they feed, enabling supply chains to be shortened and communities to source increasing amounts from closer to where they live. **People** are reconnected with farming; involved with the production, trading and celebration of food.

ECOLOGICAL FARMS (SUPPLY)

- Low input: organic or near as
- Predominantly small to medium scale: appropriate & human scale
- Mixed, diverse and integrated
- Use human skills and labour, backed up by appropriate technology and grounded in sound science

Sustainable food cities: taking a whole system approach to food and nutrition

Food and the environment: reducing the ecological footprint of our local food system.

- Producer emissions reduce and resilience increases via training on agroecology, permaculture design, seed saving.
- Increased farm diversity/ resilience.
- Carbon sequestration.
- Food waste reduction and waste emissions
- Local food culture shift towards seasonal, local, organic, community eating (demand driven emissions).

Sustainable food procurement

- Production emissions
- Supply chain emissions
- Lead by example - reduces demand driven emissions.

Healthy food cultures

- Demand driven emissions
- Waste reduction
- Community building/ resilience

Lancaster Sustainable Food Cities

Growing local sustainable food economies.

- Reduced food miles/ distribution emissions.
- Increased local biodiversity/ resilience and carbon sequestration.
- Surplus redistributed, waste reduction.
- Local wealth creation > more meaningful jobs > increased disposable income and awareness of healthy food > more sustainable diets > demand driven emissions reduced.

Community food skills

- Community food producers > urban production and reduced distribution emissions.
- Increased knowledge reduces demand driven emissions
- Waste reduction
- Community of practice/ resilience

Food poverty and access: moving beyond the food bank.

- Sustainable diets more accessible > demand driven emissions.



Climate Friendly Food

Low carbon food
from rich soil farming

www.climatefriendlyfood.org.uk

Carbon Calculator
Participatory Certification
Education



Gold Award

Climate Friendly Food



Silver Award

Climate Friendly Food



Bronze Award

Climate Friendly Food

Printed on 100% recycled paper using vegetable based inks.
Created by Leap: www.designforchange.co.uk



.....has adopted low-carbon policies

Farm energy saving policy

- Ask – is this operation necessary?
- Turn engines off when not in use
- Minimise cultivation drag

Machinery maintenance policy

- Regularly service engines

Heated buildings policy

- Optimise insulation
- Turn down thermostats

Electricity policy

- Equipment not left on standby
- Timers and movement detectors

Rich-soil farming policy

- Increase soil organic matter levels
- Reduced tillage
- Reduced summer fallows
- Avoid erosion of bare soils
- Move towards perennials food crops

Nitrous oxide reduction in soils policy

- Greenhouse gas 296 more potent than carbon dioxide (CO₂)
- Incorporate organic material in spring or autumn

- Move away from fossil fuels
- Tractors correctly weighted
- Move towards renewable energy

- Check tyre pressures

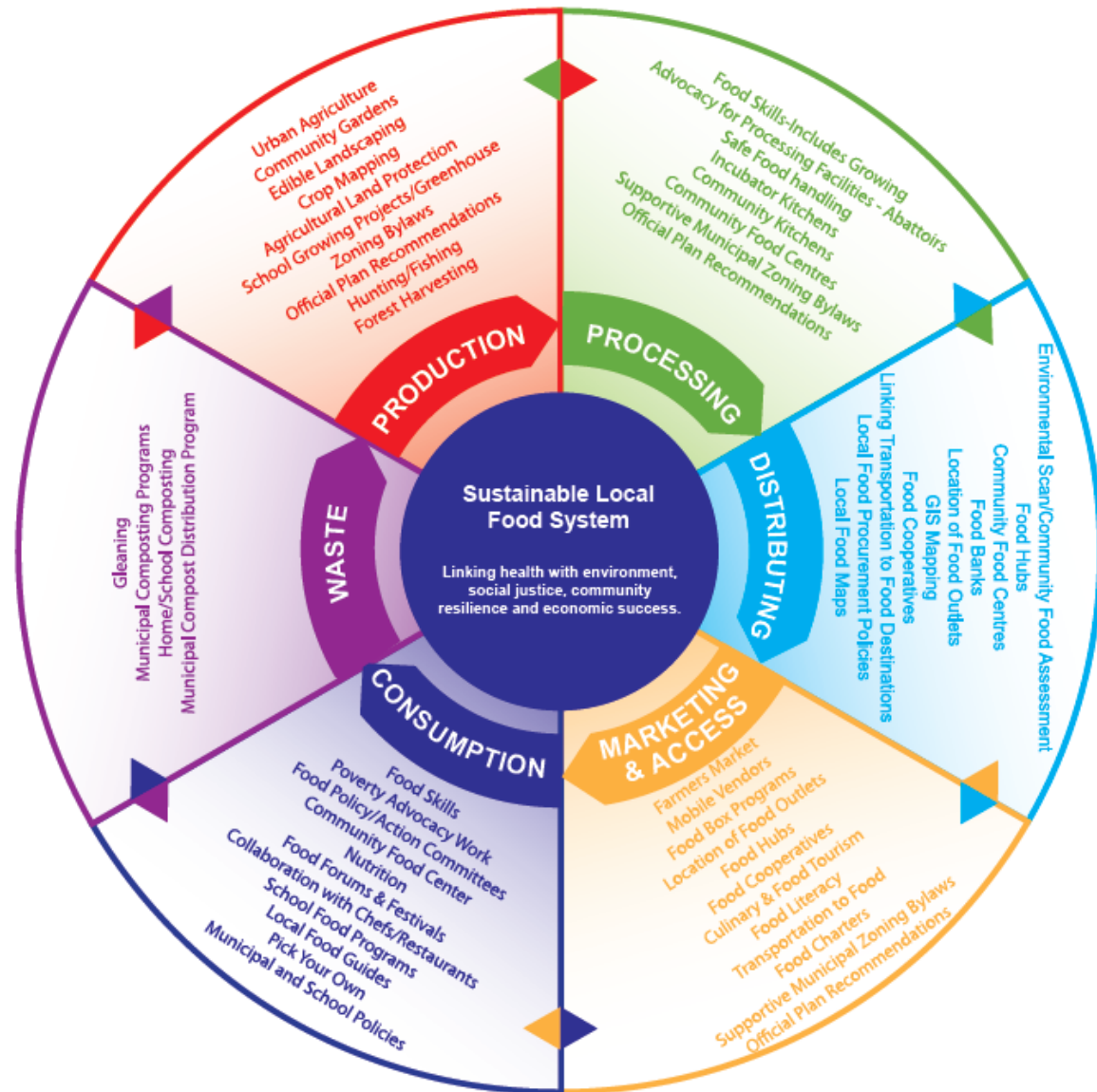
- Optimise draft exclusion
- Move towards renewable energy

- New appliances – low energy rated
- Keep electric motors clean

- Crop rotations with fertility phases
- Ploughing less than 15cm / 6"
- Avoid compaction of wet soils
- Crop mixes with deep roots
- Move away from peat use

- Happens if there is surplus nitrogen in warm and wet soil conditions

Question 4 Prompt - highlighting Interventions and leverage points for discussion



Sustainable food & climate change resources

Resource	Link
Citizens' Assemblies	www.citizensassembly.co.uk
Food Climate Research Network	www.fcrn.org.uk
Sustain: Sustainable Food Guidelines	www.sustainweb.org/sustainablefood
Zero Carbon Britain Report	www.cat.org.uk/info-resources/zero-carbon-britain/
Soil Association: Saving the Earth from Ground Up	https://www.soilassociation.org/support-us/saving-the-earth-starts-from-the-ground-up/
WWF-UK50: foods for healthier people and a healthier planet	https://www.wwf.org.uk/sites/default/files/2019-02/Knorr_Future_50_Report_FINAL_Online.pdf
Eating Better: Attitudes to meat?	https://www.eating-better.org/blog/attitudes-to-meat-consumption
Green Kitchen Standard (recognises caterers that sustainably manage their energy, water and waste)	https://www.foodforlife.org.uk/catering/green-kitchen-standard
Green Alliance 'Cutting the climate impact of land use' (Sets out how the UK could bring its land use emissions to net zero)	https://www.green-alliance.org.uk/resources/Cutting_climate_impact_of_land_use.pdf
Harwatt, H and Hayek, M. 2019, Eating away at climate change with negative emissions: Repurposing UK agricultural land to meet climate goals	http://animal.law.harvard.edu/wp-content/uploads/Eating-Away-at-Climate-Change-with-Negative-Emissions%E2%80%93Harwatt-Hayek.pdf
Bowles, N et al. 2019. The livestock sector and planetary boundaries: A 'limits to growth' perspective with dietary implications	https://science.sciencemag.org/content/363/6424/282

Sustainable food & food system resources

A Peoples Food Policy	www.peoplesfoodpolicy.org
Feedback	feedbackglobal.org
Food Co-ops	www.foodcoops.org
Food Foundation	foodfoundation.org.uk
Growing Communities	www.growingcommunities.org
Sustain	www.sustainweb.org
Food for Life	https://www.foodforlife.org.uk
Landworkers' Alliance	https://landworkersalliance.org.uk