



Climate Adaptation and Resilience

Prepared for Hertfordshire Councils
November 2021

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Introduction

Framing this report

- ❖ HEART Community Group is a collection of concerned citizens in Hertfordshire. We educate and advocate for Adaptation. We also support and build local community resilience.
- ❖ Rather than recommend specific strategies (we're not telling you what to do!), our preference is to point out areas you might explore and pay attention to.
- ❖ We understand that Councils are working with severe constraints and limited resources.
- ❖ Nothing in this report implies any criticism or judgement – and we are grateful for all your hard work so far!
- ❖ Our feedback focuses on the need to shift the paradigm, and prioritise Adaptation and Resilience Measures – as well as working towards Net Zero.
- ❖ We hope you find this report helpful, and would be delighted to engage further with you.

Preamble

Sadly, the world has left it too late to prevent the climate crisis.

The crisis is here.

In the UK, in 2021, we are already beginning to experience extreme weather events – but so far nothing compared to other countries in the Global North – let alone the Global South.

It's too late to think we can prevent it – **we have to adapt** to the issues that are already here, and the much worse climate chaos that is coming. We also have to do everything we can to not make matters worse.

Mitigation is still vital of course – but so many people still talk about this issue as though it's something that will only impact our children or grandchildren – and dates like 2050 or the end of this century are often used to 'kick the can down the road'.

More priority is being given to adaptation



Adaptation was, for the first time, an important theme at this year's COP in Glasgow

The HCCSP (Hertfordshire County Council Sustainability Partnership) recently added an extra project/workstream about Adaptation (we like to think we had something to do with that)

We're still heading in the wrong direction



The UN concludes we're still heading in the wrong direction.

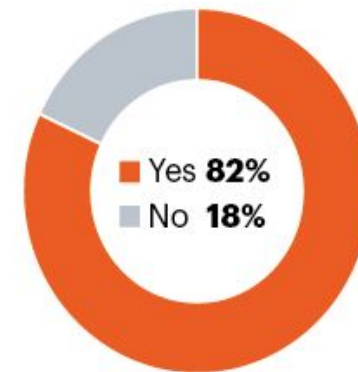
September 2021: "Despite all the promises and pledges, the world is still on course to heat up to dangerous levels" is the blunt assessment of the UN after studying the plans of 100 countries.

<https://www.bbc.co.uk/news/science-environment-58600723>

Top climate scientists are sceptical that nations will rein in global warming, as this article in Nature from 1 November 2021 explains:

<https://www.nature.com/articles/d41586-021-02990-w>

Do you think you will see catastrophic impacts of climate change in your lifetime?



Weaknesses of most Climate Action Plans across Hertfordshire



When creating Climate Action Plans and Strategies, most Councils have started with the following underlying premise;

“How can we reduce emissions and reach net zero?”

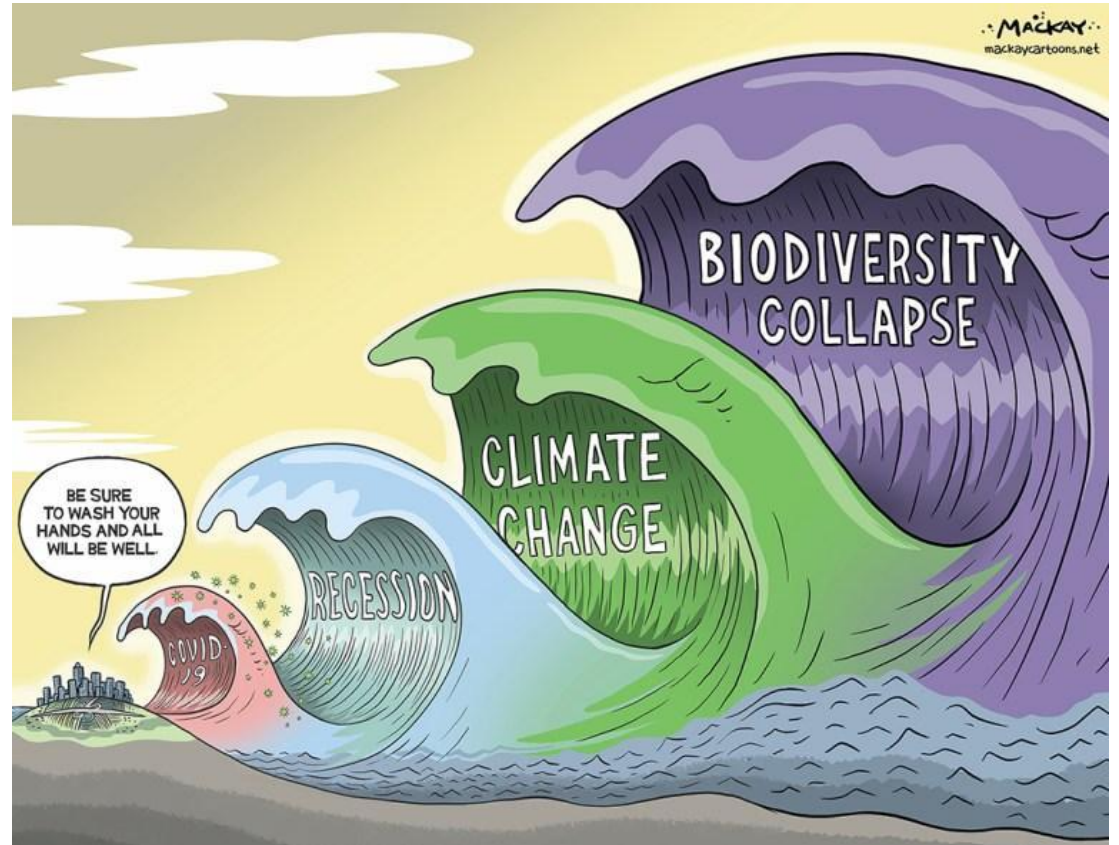
All your actions and strategies understandably flow from this premise. We invite you to question and broaden this starting point and add this question:

“How can we prepare and adapt now to create more climate resilient communities?”

The challenge we face, is not limited to climate change - we are facing a series of interconnected predicaments



- ❖ Climate Change – and associated extreme weather events
- ❖ Collapse of bio-diversity and eco-systems
- ❖ Zoonotic diseases (e.g. Covid)
- ❖ Economic fragility
- ❖ Increasing social injustice
- ❖ Resource depletion
- ❖ Crisis of Meaning
- ❖ Disconnection and Polarisation



There is an urgent need to focus significant effort on Adaptation and Preparation for Resilience now – whilst continuing all Mitigation efforts



Hertfordshire's Climate Strategies do not yet reflect the existential nature of these multiple and inter-connected threats.

It assumes that our way of life will pretty much continue as it is now – but just “greener”.

In connection with this, there is also a moral obligation to directly **consider worst-case scenarios**, and the inevitable **social injustice** that will arise from these.

Instead of seeing the climate problem as one felt by future generations, we need a focus on what could happen tomorrow, next month or next year.

We must better understand, appreciate and acknowledge the vulnerability of modern society – and address this vulnerability at its core



If we somehow miraculously reached Net Zero emissions tomorrow morning, but we continued with 'business as usual' we would still be in a great deal of trouble.

We must go deeper than that – because of three things:

- ◆ **Overshoot**
- ◆ **Tipping Points**
- ◆ **Feedback Loops**



We need radical transformation

Experts agree that many of the impacts of climate change are already ‘baked in’...



...regardless of our success in reducing carbon emissions.

It is rational to expect that things will get worse before (and if) they get better.

This article from George Monbiot from September 2021 sums it up well:

<https://www.theguardian.com/commentisfree/2021/sep/09/earths-tipping-points-closer-current-climate-plans-wont-work-global-heating>

“The target that much of the world is now adopting for climate action – net zero by 2050 – begins to look neither rational nor safe”

What do we mean by Adaptation?

Imagine a car racing toward a brick wall, too fast to stop in time. The driver has two primary tools—the brakes, which will slow the car down, and the airbags, which will cushion the passengers when they crash.

Mitigation is the brakes—it will slow climate change and reduce the overall magnitude of change.

Adaptation is the airbags—it might protect and cushion people and nature somewhat as climate change progresses



It's not Mitigation versus Adaptation, we need both



We recommend that you adopt twin foci – a **Race to Net Zero**, coupled with a **Race to Resilience**

"I would like to see us launch a race for resilience. We have a race for zero that's been launched in association with the COP, where we're getting businesses and organizations and community groups and local authorities all signing up to say they're going to get to net zero. I would like to see businesses and local authorities and community groups all signing up to say that we're going to be prepared for the changes that the climate is going to be bring. We've got to be prepared to make sure we live in a successful and resilient country and that we contribute to making the rest of the globe a successful and resilient world."

Baroness Brown, Deputy Chair of the Committee on Climate Change

https://www.youtube.com/watch?v=Sk_bCwH4OS8&t=654s





Global Leaders on COP26

CLIMATE EMERGENCY DEMANDS POLICY SHIFT TO ADAPTATION

In September 2021, Adaptation measures were given an even stronger priority by Global Leaders who met in Rotterdam in the run up to COP26, and concluded:

“The success of COP26 will be determined by whether, for the first time, climate adaptation is elevated to an equal priority with the mitigation of carbon emissions”

<https://gca.org/news/global-leaders-on-cop26-climate-emergency-demands-policy-shift-to-adaptation/>

The Environment Agency strengthens its stance...



WHY NET ZERO ISN'T ENOUGH

Sir James Bevan, Head of the Environment Agency, says we need urgent need for change if humanity is to survive (Feb 2021)

The climate emergency is already hitting “**worst case scenario**” levels that if left unchecked will lead to the collapse of ecosystems, with dire consequences for humanity, according to the chief executive of the Environment Agency. He urged politicians to take action to adapt to the “inevitable” impacts of the climate emergency.

<https://www.gov.uk/government/speeches/more-than-zero-why-net-zero-alone-wont-save-the-planet-and-what-will>



...and this more recent report, published on
13th October 2021



Adapt or Die

<https://www.gov.uk/government/news/adapt-or-die-says-environment-agency>

Our Recommendations

Our recommendations centre around the urgent need for Adaptation - as well as Mitigation



Most Climate Strategies are what we would call a 'Column 2' Strategy (see chart on p25)

This would suggest that your current understanding of Adaptation is limited to:

- ❖ Individual behaviour changes – diet, travel and lifestyle etc
- ❖ Skills, jobs and economic recovery

We invite you to broaden your understanding of Adaptation to encompass **resilience for worst-case scenarios**, including;

extreme weather events
flooding warming food security
large numbers of climate refugees

The UK Climate Change Committee is clear on the need to understand and act on this



See our summary of their recent reports on climate risk and preparedness.

<https://heartcommunitygroup.org/executive-summary-ccc-risk-assessment-3-june-2021/>

In addition, as more and more people wake up to how urgent our situation is, we will see a massive impact on **mental health**

Planning for how we support people with this should also be a core part of your strategy.

The future is increasingly TUNA - turbulent, uncertain, novel and ambiguous

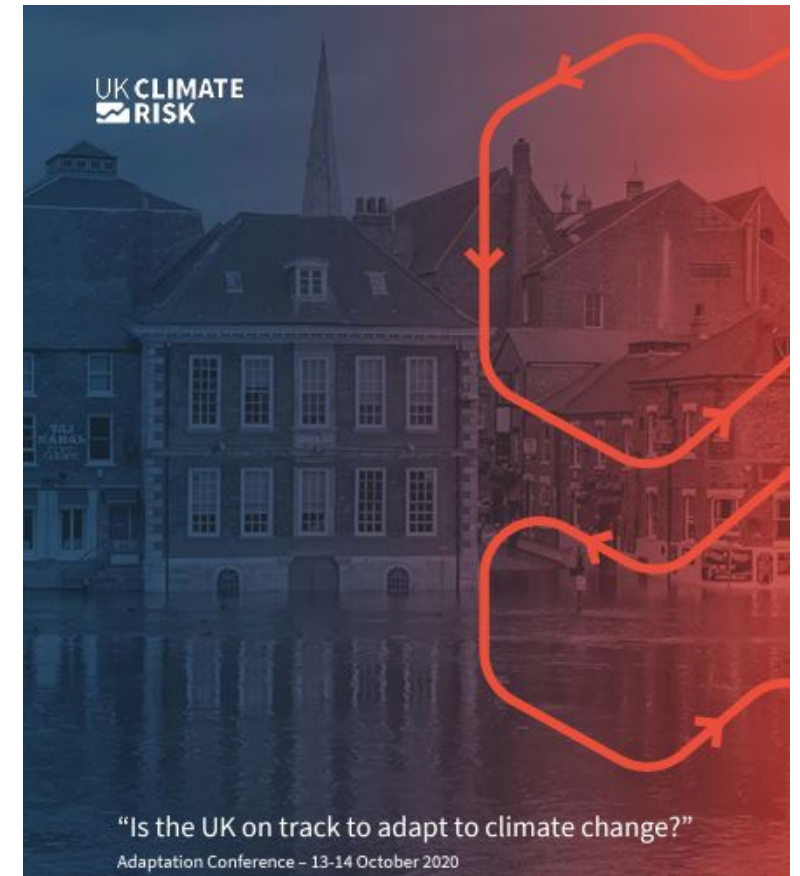


There are lots of great resources on the UK Climate Risk Conference website - Is the UK on track to adapt to climate change?

<https://www.ukclimaterisk.org/learn-more/conference-is-the-uk-on-track-to-adapt-to-climate-change/>

The risks include **health, food security, violent conflict, international law and governance, and public health**. The world is more vulnerable to the transmission and amplification of risk than it was.

The potential for disruption is high given the complexity of our global systems today, and the uncertainty of how they will develop over the next decade.



Local Community Resilience

Factors to Consider

Our recommendations could be summarised as strategies to strengthen Local Community Resilience - which includes the following key areas:



1. Community Education, Engagement & Mental Health
2. Food Security
3. A Resilient Local Economy
4. Town Planning
5. Climate Migrants
6. Flooding
7. Risks from Warming
8. Climate Resilient Buildings and Infrastructure

Before you read our recommendations, please take a look at the table on the next page



The 4 Paradigms

Which column are you in?

Your answer is important, because all of your priorities, actions and strategies will flow from it.

This could be an extremely useful discussion to have with all those engaged in planning and implementation of your Strategy.

Interestingly, in our conversations with Local Authorities, people will answer “Officially, Column 2”. When asked what their answer really is, most say “Somewhere between Columns 3 and 4”

Climate Response:	Column 1 Mainstream (RAPIDLY SHRINKING)	Column 2 Business as Usual but Greener	Column 3 Emergency	Column 4 Collapse Aware
Paradigm:	Business as usual. Yes, it's a problem but not perceived as an emergency. Far away and long into the future.	Everybody must do their bit. Fly less. Eat less meat. Carbon capture and geo-engineering projects. Work towards 2050 Paris Agreement targets. Policy changes imposed by Governments.	Peaceful civil disobedience Extinction Rebellion, School Strikers, Earth Movement Mitigation and Adaptation. If we wait for Governments it will be too late. Transformative Adaptation.	Too late for mitigation due to locked-in warming and feedback loops. Prepare now for community resilience – as well as mitigation in order to 'extend the glide' Deep Adaptation – Outer and Inner We need to build community resilience
Political & Economic System:	Industrial Growth & Extractive Capitalism	BUILD BACK BETTER Capitalism	Citizen Assemblies	Business As Usual System and 'civilised' society collapses – probably messy and very different depending on where you live. Any new economy will be hyper-local and community-based
What's most important NOW?	Recovering Economy post-Covid	Net-Zero by 2050 Being perceived as a 'leader' – resulting in much greenwashing	Advocate and campaign for radical change. Transformative Adaptation	Adaptation & Preparation now for climate-resilience Deep Adaptation. Build community resilience.
Likely outcome?	Carbon emissions still growing. Tipping points passed, 3 – 4 degrees warming baked in	Lots of Greenwashing Economic Growth still the sacred cow	?	Much suffering; social injustice; conflict over scarce resources; mass migration; famine; authoritarian Governments? Dramatic drop in human population. <i>May result in transition to a better way of life (albeit with much suffering in the process)</i>
Paul Chefurka's 'Stage of Awakening'	Asleep	Awareness of one fundamental problem – usually GHG emissions	Awareness of many problems – and interconnectedness of these	Awareness that our predicament encompasses all aspects of Life – including the 'stories' of our industrialised civilization. Pro Life (all Life – not just human). Realisation that we ARE nature , and that it is not simply a resource and dumping ground for humans. Learning to reconnect with our deeper selves, each other, and all of Nature. A shift from 'I' to 'We'.



1.1 Community Education & Engagement

We haven't said a great deal about this – as we're sure that you are already expert in community engagement best practice. We simply point you to some useful resources to explore:

Here are **5 inspiring examples of community engagement in climate action** from April 2021:

<https://www.commonplace.is/blog/5-examples-of-community-engagement-in-climate-action>

Creating meaningful engagement with communities on climate change

Organised by the LGA in partnership with Design Council, the “Creating meaningful engagement with communities on climate change” webinar was the first in a series of four delivered as part of the Design in the Public Sector programme. The series is intended to scale design approaches across the public sector and stimulate new thinking on collective climate change matters.

<https://www.local.gov.uk/creating-meaningful-engagement-communities-climate-change>

Working together to adapt to a changing climate: flood and coast Key learning from an evidence review on community engagement on climate adaptation

This example focuses on flooding

https://assets.publishing.service.gov.uk/media/60916d8f8fa8f51b98b1513d/Community_engagement_on_climate_adaptation_slide_pack_3.pdf

1.1 Community Education & Engagement (cont'd)

Transition Towns

The Transition Town movement is an existing community network that is worth investing further in.

There are many Transition Towns in Hertfordshire and the surrounding area – including:

- ❖ Watford
- ❖ Kings Langley (Transition in Kings)
- ❖ Abbots Langley
- ❖ Chesham
- ❖ Berkhamsted
- ❖ Sustainable St Albans
- ❖ Hertford
- ❖ Northaw Transition CIC (nr Potters Bar)
- ❖ Tring
- ❖ Aylesbury
- ❖ Haddenham
- ❖ Mill Lane Community Garden
- ❖ Change4Chalfont
- ❖ Letchworth
- ❖ Buntingford

Find out more here: <https://transitionnetwork.org>



1.1 Community Education & Engagement (cont'd)

Action Guide for Local Futures

- ❖ This is a great resource suggesting 146 ways to build resilient local economies and flourishing local communities
- ❖ It's worth exploring these valuable tools and resources

<https://actionguide.localfutures.org/>

1.2 Climate Resilience Hubs, or Climate Emergency Centres (CEC's)



Increasingly, these local physical hubs or spaces are popping up across the UK, and they collaborate, network and learn from each other. There are currently no hubs in Hertfordshire.

They are described as

“the establishment of empty buildings as inspirational community hubs for the benefit of people and planet.”

In our view, these are an excellent adaptation measure to encourage in your local communities, and a great way to use empty buildings or shops. Some of the existing examples have taken over closed-down banks and betting shops that were in the High Street. They don't need to be all about the climate either – many have cafes, and offer regular classes, workshops and places for the community to meet.

Some councils offer a 100% reduction in property rates payable, which is often seen as attractive by the property owners. There are a number of physical premises now - including Ilford East London, Staines, Lewes, Swindon, Guildford and Godalming.

1.2 Climate Resilience Hubs (cont'd)



There are teams in 40+ towns and cities in the UK who are in various stages of setting up a legal entity such as a Community Interest Company or Charity, and setting up working groups.

There is an abundance of useful information here:

<https://climateemergencycentre.co.uk/>

And here's a little film about Guildford's Hub:

<https://www.youtube.com/watch?v=vMVpLRtung8&t=317s>

We particularly love the example in Staines called Talking Tree shown in the image here. A local carpenter created the logo from the wood that had been used to board up the previous empty shop.

1.3 Mental Health



Adaptation isn't just about the practical, outer dimension. We speak to many people across Hertfordshire who are struggling with climate anxiety and eco-grief

People are questioning their own futures and the futures of their children. This will almost inevitably worsen, as outlined in a major recent study, entitled:

Young People's Voices on Climate Anxiety, Government Betrayal and Moral Injury: A Global Phenomenon.

The survey was conducted and analysed by seven academic institutions in the UK, Europe and the US, including the University of Bath, the University of East Anglia, and the Oxford Health NHS Foundation Trust.

Three-quarters agreed with the statement **"the future is frightening"**

50% of young people agree or strongly agree with the statement **"humanity is doomed"**

<https://www.theguardian.com/environment/2021/sep/14/four-in-10-young-people-fear-having-children-due-to-climate-crisis>

<https://www.bath.ac.uk/announcements/rise-of-eco-anxiety-affecting-more-and-more-children-says-bath-climate-psychologist/>

1.3 Mental Health (cont'd)

As you know, **voluntary sector** groups are already overwhelmed.

How could the Council further support those working in the voluntary sector and the people they help? Mental health charities as well as those involved in social justice issues, foodbanks for instance.

Nearly half of charity leaders have considered quitting during Covid-19 as increased demand for services has exacerbated staff and volunteer pressures in a sector already struggling with burnout, according to new research.

The results also found there have been major increases in concerns relating to anxiety, stress and depression among staff.

More than two in five charity leaders polled said they had seen an increase in mental health concerns among staff since January, while two-thirds said they were concerned about the effect that staff burnout could have on their charity.

<https://www.thirdsector.co.uk/almost-half-charity-leaders-considered-leaving-sector-due-pandemic-pressure-survey-finds/management/article/1715192>

1.3 Mental Health (cont'd)

In HEART Community Group, we prioritise telling the truth, even when this might be uncomfortable.

Amongst governments – both at the national and local level, there is sometimes an understandable wish to ‘protect’ the public from knowing how bad things really are, in case of panic, wide-spread depression or despair.

In our view, this is a mistake.

Human beings are resilient. We can handle the truth.

For both children and adults, the main message coming from psychologists is that **we must be more open about our feelings**, rather than suppress them and pretend we are feeling fine.

Anxiety about climate change and its impacts is being discussed more widely in mainstream media now. This is a step forward, but there is an assumption that people positively engage in society because we believe we will make situations better.

Instead, many people engage because we are deeply motivated to **reduce suffering**, and **build community**, or because we believe in **doing what’s good and right**, whatever the situation or outcome.

Many people want to live according to their unfolding truth, help others in bold ways, and be more creative and expressive precisely because we anticipate greater disruptions to our way of life.

1.3 Mental Health (cont'd)

Scholars' Warning December 2020 **so far signed by over 700 scientists, scholars and academics globally**

It urges us to tell the truth and invite each other into conversations about the possibility of societal disruptions and collapse.

"As scientists and scholars from around the world, we call on policymakers to engage with the risk of disruption and even collapse of societies. After five years failing to reduce emissions in line with the Paris climate accord, we must now face the consequences. While bold and fair efforts to cut emissions and naturally drawdown carbon are essential, researchers in many areas consider societal collapse a credible scenario this century. Different views exist on the location, extent, timing, permanence and cause of disruptions, but the way modern societies exploit people and nature is a common concern. Only if policymakers begin to discuss this threat of societal collapse might we begin to reduce its likelihood, speed, severity, harm to the most vulnerable – and to nature."

It's worth watching this short video: <https://www.youtube.com/watch?v=f0frHogXLB0&feature=youtu.be>

Here is a recent well-researched article published in a scientific journal that challenges the mainstream assumption that we shouldn't be discussing extreme disruptions, or even the possibility of societal collapse:

<https://ojs.aut.ac.nz/ata/article/view/187>

1.3 Mental Health (cont/d)

HEART Community Group includes two core team members who experienced psychologists, and we regularly support people – at cost - who are struggling to come to terms with our predicaments.

We also offer free workshops, webinars and retreats, and we're finding that people really value the opportunity to connect deeply with others and share their hopes and fears. We regularly run RECONNECTION calls on zoom, as well as online workshops focusing on Emotional Resilience.

We also offer a 4-day (free) immersive retreat called “The Edge” for people who wish to inquire, in good company, into the questions:

- ❖ So, what's most important now?
- ❖ What's my 'thread' to pick up? and
- ❖ How can I make a difference?

The experience is designed to support people in being able to stand tall and look our interconnected predicaments in the face – from a place of courage, resilience and creativity. To deepen their inquiry into what matters most now.

“We need to learn how to love better: to love ourselves, each other and nature. We don't love well enough yet. And yet we have so much potential. There is a courage and a heroism in every human heart that can be woken up” Terry Patten



2. Food Security

The UK is vulnerable because the majority of the food we eat is imported.

A recent analysis by HSBC: "It is widely believed that 50% of food is imported into the UK"
This statistic does not represent the reality – 80% of our food is imported.

The lower number "defines food processed in the UK as UK food, even though the ingredients may have been imported.

For example, tea is processed in the UK, but we grow no tea - it is all imported.

When ingredients are counted as imported, the real figure is over 80%"

2. Food Security (cont/d)

8th October 2021

Pasta shortages after dire wheat harvest attributed to climate change.

<https://www.independent.co.uk/climate-change/news/pasta-shortage-climate-change-b1934089.html>



14 September 2021

Food supplies will struggle to keep pace with the world's growing population as climate change sends temperatures soaring and droughts intensify, according to a report from Chatham House.

<https://www.bloomberg.com/news/articles/2021-09-13/world-faces-growing-risk-of-food-shortages-due-to-climate-change>

2. Food Security (cont'd)

4 November 2021

“The world is facing the prospect of a dramatic shortfall in food production as rising energy prices cascade through global agriculture, the CEO of Norwegian fertilizer giant Yara International says.

<https://fortune.com/2021/11/04/energy-crisis-food-shortage-security-fertilizer-prices-yara-ceo-madagascar-cop26/>

4 November 2021

Global food prices have now hit a 10 year high

<https://www.aljazeera.com/economy/2021/11/4/inflation-watch-global-food-prices-hit-10-year-high>

2. Food Security (cont'd)

Wildlife conservationist Chris Packham has described Britain's relationship to food as "**broken**" after spotting imported pears that were grown in Argentina.

The naturalist made the comments in response to a pot of chopped pears that had travelled over 10,000 miles before arriving in the UK. The pot of pears were stamped: "Pears grown in Argentina. Packed in Thailand."

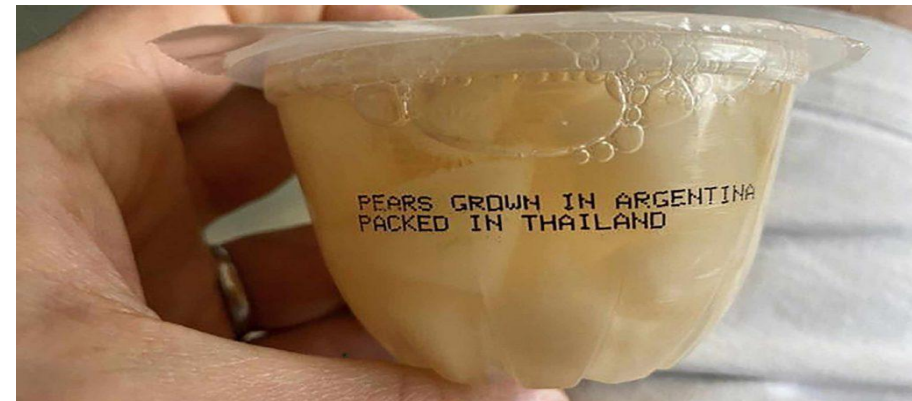
Additional links here about food security:

<https://threader.app/thread/1433829191405826052>

"It's broken isn't it? We've broken what we do with food? Pears grow in the U.K. They could grow in our gardens. We could walk out and pick them, wipe them and eat them.

No chemicals, no processing, no plastic, no planes, no sell by dates, Just fresh fruit.

God help us." Chris Packham

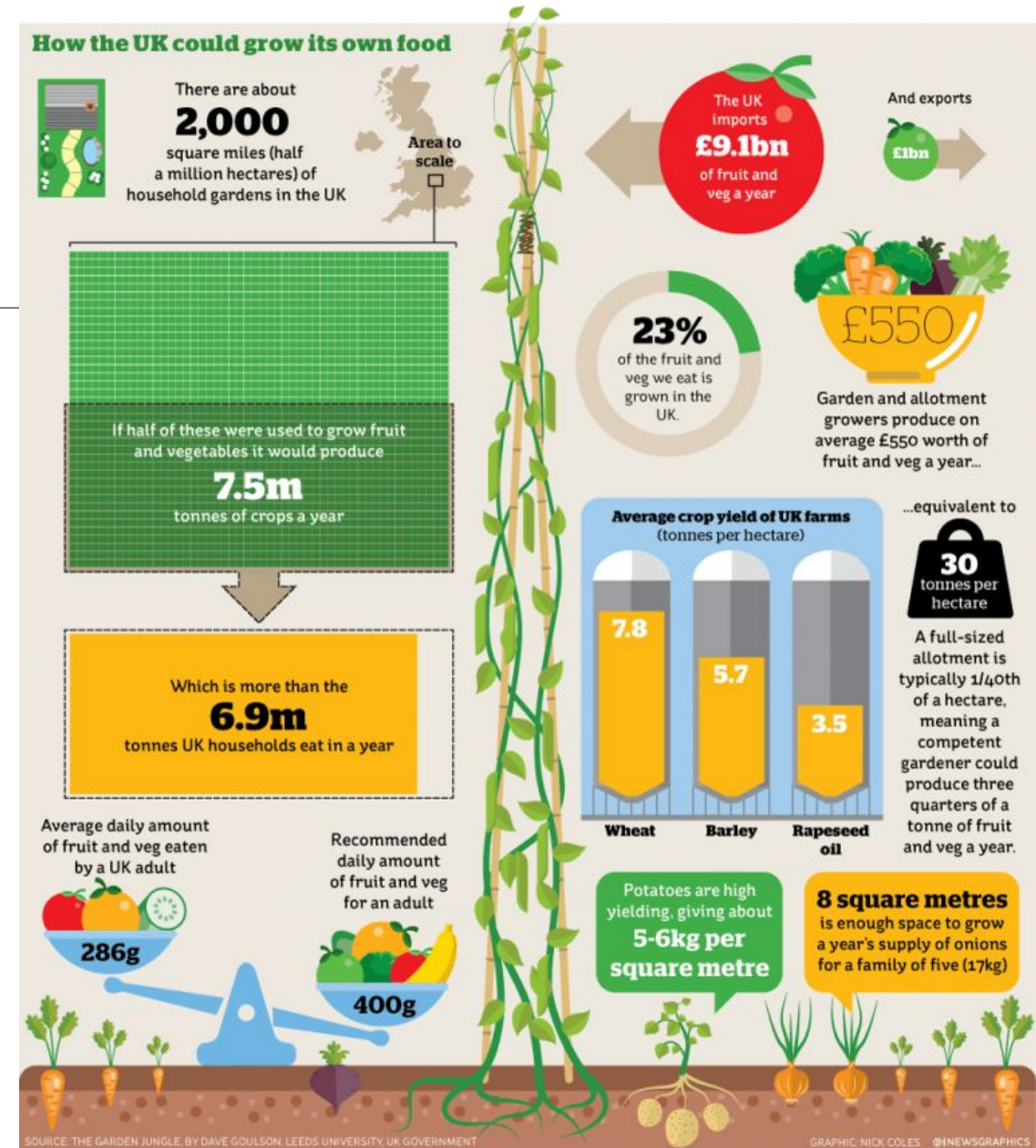


2. Food Security (cont'd)

The obvious solution is to grow more food locally

“People who survive extreme disruptions do so because their supply chains are short and local, and they know how to DO stuff!”

The image here shows what could be possible in the UK.



2. Food Security (cont'd)

Local Community Gardens are a fantastic way to encourage community-building, increase resilience and learn the skills many people have never learned.

One of HEART Community Group's core team, Kate, runs a community gardening project in St Albans, her home town.

"Grow Community – Sopwell is a local group of volunteers in Sopwell ward, St Albans, supporting people to grow their own food at home and in community spaces. We enjoy a bit of cooking along the way – and love to involve all ages including children – in #GrowYourOwn. We enjoy putting on events about growing food and looking after our local community spaces to..."

- ❖ Promote the benefits of sustainable, localised food production
- ❖ Promote the benefit of reduced food waste
- ❖ Encourage and enable local residents to grow their own food at home and in community spaces, reduce food waste, share surplus food in the community and with local charity groups
- ❖ Promote wildlife conservation and restoration projects and encourage local residents to participate in these projects
- ❖ Connect ongoing initiatives and bring the community together through activities related to the above aims (e.g. growing and preserving food, building infrastructure, competitions, providing food for local events, wildlife events)

3. A Resilient Local Economy

Economics experts are increasingly recommending that we must switch urgently to a more circular economy, rather than our current infinite growth economy with its reliance on global supply chains.

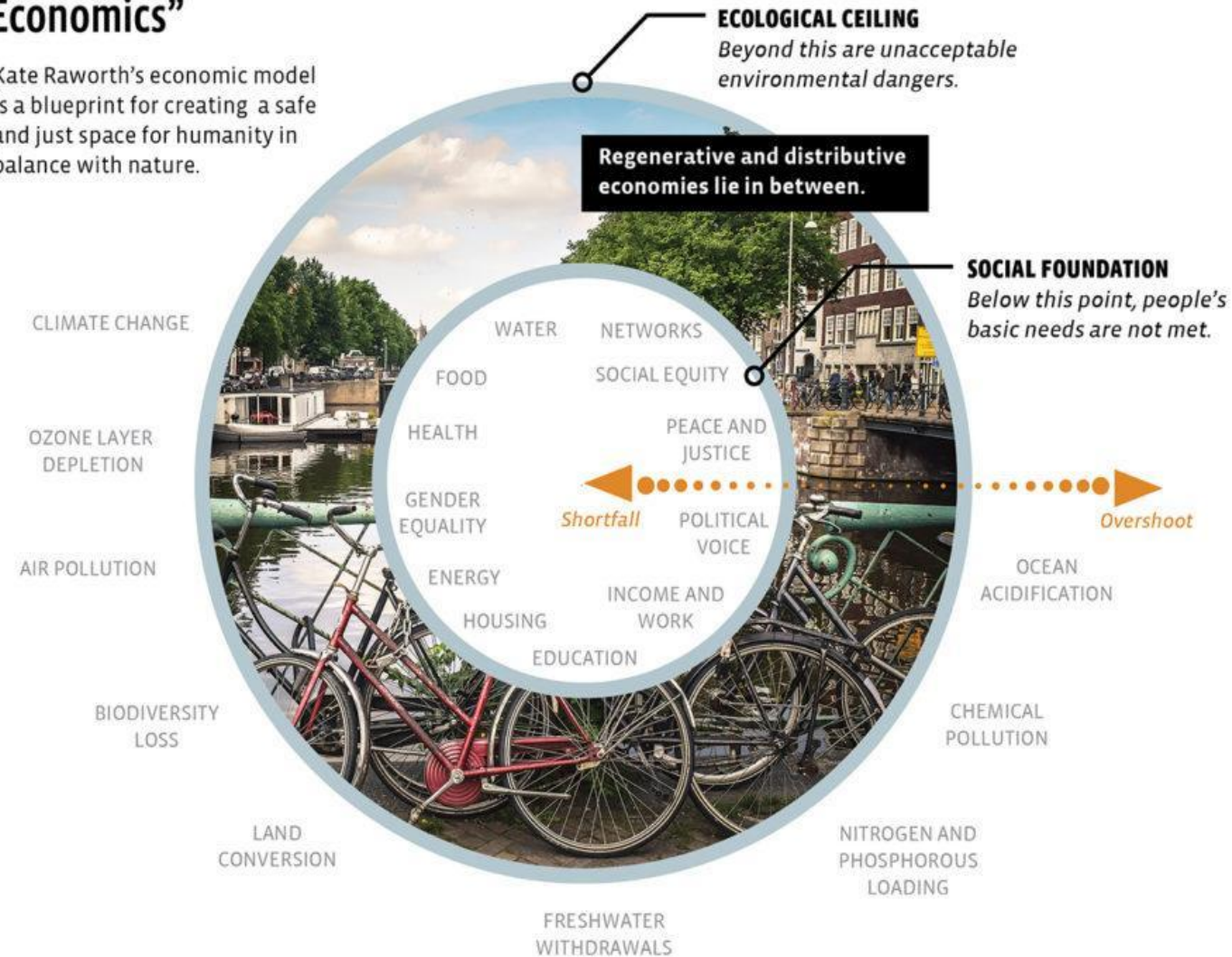
In our view, one of the best models is Kate Raworth's Doughnut Economics.

<https://doughnuteconomics.org/>

There are already many cities and towns where this model is being tried, including Amsterdam and Barcelona, with promising signs.

This Is "Doughnut Economics"

Kate Raworth's economic model is a blueprint for creating a safe and just space for humanity in balance with nature.



SOURCE: KATE RAWORTH, DOUGHNUT ECONOMICS
PHOTO BY JACE AFSOON
INFOGRAPHIC BY TRACY MATSUE LOEFFELHOLZ/YES! MAGAZINE

3. A Resilient Local Economy (cont'd)

This video is highly recommended:
Kate Raworth and Roman Krznaric in
conversation with Vicki Robin as part of her
“What Could Possibly Go Right?” podcast
series (from 21 September 2021)

<https://www.youtube.com/watch?v=QSCn3KW-Cas>

4. Town Planning

We recommend studying this document in detail:

Planning for Climate Change: A Guide for Local Authorities

This guide sets out how local planning authorities can help to shape places with greater resilience to the impacts of climate change.

Increased resilience will reduce future costs both for businesses and communities.

The guide is intended to help planners and decision-makers to address climate change and improve resilience.

<https://www.linkedin.com/pulse/planning-climate-change-guide-local-authorities-tcpa-peter>

4. Town Planning (cont'd)

The '**20-minute Neighbourhood**' concept means creating places where most of people's daily needs can be met within a short walk or cycle.

Multiple benefits include:

- being more active
- improving mental and physical health
- traffic is reduced
- air quality improved
- local businesses thrive
- people see more of their neighbours = community & cooperation strengths



4. Town Planning (cont'd)

The TCPA (Town & Country Planning Association) working in coalition with partners to learn from already implemented 20 minute neighbourhoods, to see how this can be introduced here in context of English planning system.

<https://www.tcpa.org.uk/the-20-minute-neighbourhood>

Working with partners the TCPA are creating resources to help councils and communities that want to introduce 20 minute neighbourhoods to their area, including a free guide to creating 20-minute neighbourhoods.

5. Climate Migrants / Refugees

Recent analysis shows that climate migration may soon be the biggest climate challenge of our time.

See this recent article in the FT from 4 October 2021.

<https://www.paragkhanna.com/migration-will-soon-be-the-biggest-climate-challenge-of-our-time/>

5. Climate Migrants / Refugees (cont'd)

It has been estimated that for every additional degree of global warming, one billion climate refugees will be created.

Climate disasters 'caused **more internal displacement** than war' in 2020.

Refugee organisation says 30m new displacements last year were due to floods, storms or wildfires. There were more than twice as many people displaced within their own country as forced out of their country as refugees, the IDMC said. The number is the highest on record, but in line with its steady rise over the past decade.

<https://www.internal-displacement.org/global-report/grid2021/>

5. Climate Migrants / Refugees (cont'd)

During a year that was the warmest on record, **5 million more people were displaced than in 2019.**

We cannot advise on how you should handle additional demand in your town or city over the coming years, and we realise that you will be guided by national Government policy.

We simply say there is an urgent case for exploring and considering this.



6. Flooding

As you know, climate change means that flooding is an increasingly likely risk.

The London Fire Brigade responded to 114 calls to flooding across the capital today (4th October 2021)

<https://twitter.com/i/status/1445261139>

See here for our summary of the climate risk and preparedness reports from the UK Climate Change Committee:

<https://heartcommunitygroup.org/executive-summary-ccc-risk-assessment-3-june-2021/>

According to these reports, there are well-developed policies in place already for water scarcity and flooding. You will know about your own local risk assessment for your area.



We are not on track: The CCC's latest assessments



EMISSIONS

Not on track to meet Net Zero targets by 2050

Will the government's **Net Zero Strategy** be

- Ambitious enough?
- Published before COP26?

Top priorities: CCS*/industry, transport, agriculture & buildings

RISK & ADAPTATION

Adaptation action has failed to keep pace with the worsening reality of climate risk

Eight priorities identified for action over the next two years

- Including biodiversity, natural carbon stores, agriculture, power supply, overheating buildings, **multiple overseas risks**
- (Well-developed policies are in place for water scarcity & flooding)

Plan for high-impact risks, e.g. **tipping points, cascading risks**

**Need
for...**

**Public Engagement Programme for Adaptation
UK Resilience Strategy**

7. Risks From Warming

If we reach an additional two degrees of warming over the pre-industrial average, scientists tell us that substantial numbers of people will be dying of heatstroke – in the UK and Europe.

New analysis assesses the impact of climate change on the deadly combination of heat and humidity, measured as the “wet bulb” temperature (WBT).

Once the temperature reaches 35C in high humidity, the human body cannot cool itself by sweating and even fit people sitting in the shade will die within six hours.

7. Risks From Warming (cont'd)

As the climate warms in places like the UK, people can take sensible precautions against heat – slowing down, drinking more water, and seeking cool refuges.

Air conditioning is one of the last lines of defence but comes with its own problems such as very high energy demands.

Cooling systems are expected to dramatically increase electricity demand.

Practical examples include planting **more street trees, window shutters** and to paint all building roofs with a special **white paint**. White surfaces reflect more sunlight and a coat of white paint to the roof can bring down temperatures inside by 3-4 degrees.

<https://www.bbc.co.uk/news/science-environment-59051407>

8. Climate Resilient Buildings And Infrastructure



Current buildings policies are locking in vulnerability and irreversible impacts.

For example, half a million new homes have been built in the UK in the last five years that are not resilient to the high temperatures we'll see in the future.

They all face a costly retro-fit to make them safe and habitable, and it's **four times more expensive** to retro-fit than it would have been if we included these adaptation measures at the new-build stage.

8. Climate Resilient Buildings And Infrastructure (cont'd)



This article by the UN Environment Programme recommends five ways to make buildings climate-change-resilient: <https://www.unep.org/news-and-stories/story/5-ways-make-buildings-climate-change-resilient> which covers;

- Resilience to heatwaves
- Resilience to drought
- Resilience to coastal flooding and sea-level rise
- Resilience to storms, tornadoes, cyclones and hurricanes
- Resilience to cold

All new builds should be built to at least Passivhaus standards.

Buildings are a significant culprit of carbon emissions – accountable for 35% of total global energy consumption.

Passivhaus is a leading international design standard, slashing energy use from buildings AND delivering high standards of comfort and health

<https://www.passivhaustrust.org.uk/>



How can we support you further?

We hope you have found this report to be useful for your own reflection and strategy work.

If you would like to engage further, either for an informal conversation, an Introduction to Deep Adaptation or for emotional resilience support for yourself or your staff, please get in touch.



We are a Group of Hertfordshire residents concerned
with climate risk and the need for adaptation
Committed to local community resilience,
both practically and emotionally



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Appendix

Different Types of Adaptation

Adaptation is starting to happen across the UK – but it’s slow, patchy and mostly rather “shallow”.

Here is a table comparing three different approaches:

3 Approaches to Adaptation

Shallow Adaptation	Deep Adaptation	Transformative Adaptation
<p>Actions to manage the predictable risks of climate change impacts - within the ‘business as usual’ paradigm.</p> <p>Assumptions: Society will continue largely as it currently is</p> <p>Examples:</p> <ul style="list-style-type: none"> • Climate resilient buildings and homes • Flood protection & sea walls • Disaster and emergency planning • Planning for business continuity • Infrastructure upgrades <p><i>“It’s an engineering problem, and has engineering solutions”</i> (Rex Tillerson, ex-CEO of ExxonMobil and former US Secretary of State)</p>	<p>Acceptance that business as usual cannot be sustained, and preparing now for what may be a very different way of life.</p> <p>Assumptions: Collapse is likely and already unfolding around the world</p> <p>Works to ‘soften the landing’ and respond lovingly to our predicaments by building resilient local communities. Strong emphasis on psychological, emotional and spiritual responses.</p> <p>20-minute neighbourhoods and local community resilience. Local food and water security. Climate refugees (millions? billions?)</p> <p>See 4R’s</p> <ul style="list-style-type: none"> • Resilience • Relinquishment • Restoration • Reconciliation/Reconnection <p>Interconnected with everything – including our human ‘stories’ of infinite progress and human domination over nature.</p>	<p>Focuses on transforming society whether or not collapse happens, because the current system is insanely ecocidal and socially unjust.</p> <p>Assumptions: None. Works in the uncertainty.</p> <p>.</p> <p>Work with nature – e.g. restore wetlands and mangrove swamps rather than building ever higher sea walls.</p> <p>Relocalisation, local food production, permaculture, ewilding.</p> <p>Similar in many ways to Transition Town movement – but with more of a macro and political perspective.</p> <p>Involves taking things into our own hands using some of the tools used by XR e.g.</p> <ul style="list-style-type: none"> • Citizens’ Assemblies • NVDA • Guerilla food gardening

Deep Adaptation

Deep Adaptation is a rapidly growing global community and framework that includes inner (psychological and emotional) as well as outer (practical) responses and measures.

<https://www.deepadaptation.info>

HEART Community Group regularly facilitates webinars on Deep Adaptation, and we are happy to provide more information on what people and communities can do under each of the 4R's:

Deep Adaptation: The 4 Rs



<http://www.lifeworth.com/deepadaptation.pdf>

A framework for navigating our climate predicament



RESILIENCE

What is it that we most value and how can we keep that? How can we build and sustain our resilience – both inner and outer?

RELINQUISHMENT

What can we give up in order not to make matters worse?

RESTORATION

What can we bring back that has been lost?

RECONCILIATION/RECONNECTION

*What can we do to make peace with, love and support others?
How can we live with love, joy and peace?*

Our Focus

Awareness, Education, Advocacy

- ❖ **Engage and campaign with local leaders**
(political, health & community organisations)
Inform, support and urge them to;
 - advocate for adaptation and resilience
 - communicate the importance of community resilience
 - 'Tell the Truth' about how dire the predicament is
 - model kindness / love / caring
- ❖ **Educate** through social media, talks, articles, retreats and workshops

Contribute to community resilience

- ❖ **Provide support in:**
 - Personal and community resilience and clarity
 - Mental health & wellbeing
 - Provide opportunities for people to engage in 'inner' and 'outer' adaptation
- ❖ **Build** a co-nourishing network of people who are adapting and preparing – and learning with and from each other
- ❖ **Signpost** to resources, support and partner organisations