Briefing

Sustainability first

Supporting the Transformational Shift Toward Sustainability
Sustainability Principles Project: Framework and Strawman

A principles-based approach to decision making can help cut through complexity, align interests, and change mindsets. It can help unlock difficult debates and navigate trade-offs on issues such as net zero when things are moving quickly and action is needed at scale and pace. But principles can mean different things to different people – and they are only as good as how they are applied. This Briefing Paper is intended to stimulate discussion about the principles that should underpin decision making by policy makers, regulators, companies, investors and others in essential services to support the transformational shift taking place toward sustainability. It provides a framework for thinking about a principles approach and proposes a strawman set of principles to aid discussions on this topic in our major Sustainability Principles Project which covers the energy, water and communications sectors.

1. Background

Organisations are in different stages of their respective sustainability journeys. As our accompanying project **Needs Case Briefing Paper** identifies, much good work is going on, the desire for a transformational shift is clear and there is a real opportunity for change. However, for this shift to become reality, our research highlights a need to support new principles to drive and embed more consistent and confident decisions for sustainability and long-term thinking. Our analysis has highlighted the importance of using principles to support all actors to identify synergies and co-benefits and navigate complex, unavoidable trade-offs on 'wicked' issues.

A principles approach can help fill the **current gaps ('the 4 i's')** that our research indicates need to be addressed to better support sustainable decision making and the change in culture needed to enable greater focus on public purpose and public value. These are:

1) **Influence**: How companies, regulators, policy makers and investors are influenced;
2) **Interaction:** How companies, regulators, policy makers and investors interact (both within and between sectors). This interaction applies to both different actors and different issues – one can shape and reinforce the other;
3) **Interpretation:** How the law and regulation are interpreted by all sides. This is particularly important when it comes to issues that involve trade-offs and co-benefits; and
4) **Implementation:** How policy and regulation are implemented in practice.

By addressing these gaps and embedding sustainability related principles into culture, processes and measurement, they can equally become a driver of sustainable and lasting change.

This Paper begins by summarising our literature review in this area. Building on this, it then sets out a framework and strawman for the sustainability principles that we propose this project explores further**.** The paper then briefly discusses the relationship between principles that guide behaviours and governance and principles enshrined in law.

The different outcome principles the project proposes to focus on are then considered. These are: fairness and people centered services; protection of natural capital, net zero and wider environmental protection; and resilience and future focus. The paper then considers the overlaps between principles and the issue of trade-offs and synergies before outlining the project's next steps. These include testing the proposed sustainability principles with civil society groups and against real life problems and use cases.

2. Literature review

There is already significant and very valuable work on ethical and good regulation principles. For example, the May 2021 report from the Taskforce on Innovation, Growth and Regulatory Reform has highlighted the importance of good regulation principles for agility, competition, and innovation.[1]

This project will seek to build on and not replicate this work. To get the project started, we therefore carried out a

[1]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/994125/FINAL_TIGRR_REPORT__1_.pdf

literature review of relevant published principles and further related resources.

Our analysis covered 31 key sets of principles across 14 governmental, ten regulatory (economic, environmental and governance/reporting regulators) and seven civil society publications. It identified 120 different principles in the following four broad groups of principles: ethical; regulatory; enabling; and outcomes. The latter principles were broken down into four groups of outcomes: generic; fairness; environmental; and resilience. We then reviewed over 60 documents related to these different outcome principles.

> The broad definition of the term 'principle' that we used for this review was:
>
> *'A principle is a basic rule or fundamental proposition which serves as a foundation for a system of behaviour.'*
>
> It is important to note that there may be other sources that we did not look at which may use different terminology but cover similar ground.

The five most frequently mentioned principles across all areas in our analysis (listed in terms of number of mentions) were: transparency; systems and joined-up thinking; collaboration; long-term-/intergenerational issues; and adaptability and fairness (the last two scored equally high). A wide range of other principles were also mentioned but not as frequently.

A more detailed analysis shows that whilst generic principles such as adaptability are frequently cited, one could argue the required pre-conditions and tools to put those principles into effect are often under-represented. For example, sharing and providing clear information, and defining a clear purpose, are amongst the least often mentioned principles even though they are paramount for transparency. Furthermore, preparing an organisation for a challenge such as implementing systems thinking and collaboration may need changes to behaviours, values, organisational structure and linking performances to purpose, but these principles are also among the least mentioned. These points may be partly semantic and down to people defining things in different ways but may be important if principles are to provide concrete and practical guidance for decision-makers.

Even though fairness, diversity and accountability are mentioned quite often, there are few definitions of fairness; and compassion, vulnerability, health and happiness are rarely mentioned.

Within the area of environmental protection, preserving the environment, reducing emissions and addressing wider environmental outcomes are frequently mentioned, whilst mentions of specific principles such as the precautionary principle or polluter pays principles are very low.

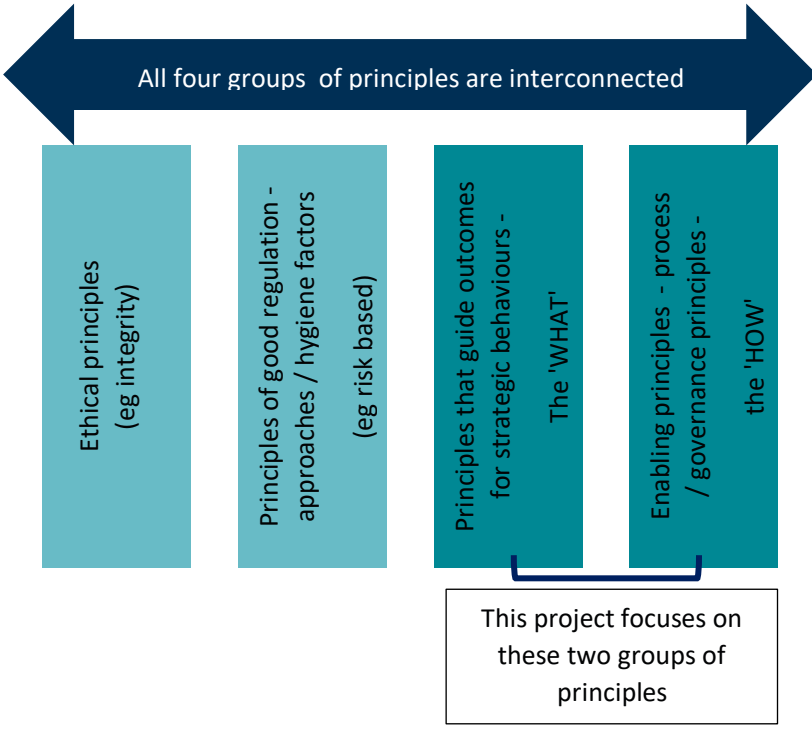
In our literature review, the area of resilience was the least covered in terms of the number of mentions. When it was mentioned, it tended to be in terms of competitive approaches, good jobs and growth. Sustainable resources, long-term financing, good design and meeting future infrastructure needs were rarely mentioned.

3. Framework and Strawman for Sustainability Principles in the Energy, Water and Comms Sectors

Decisions regarding sustainability in essential services often involve "wicked" issues which raise fundamental questions about roles and responsibilities, can be seen in different ways from different perspectives and require judgement. To feel our way forward in these difficult areas, in this project we will therefore work in an iterative and inclusive way.

Building on our literature review, the following framework and strawman were developed to help start our thinking about principles. These were considered by our project Steering Group in July[2].

Proposed Framework for Sustainability Principles



[2] See here for current list of Steering Group members: https://www.sustainabilityfirst.org.uk/sustainability-principles

None of the four groups of principles in the framework diagram can be viewed in isolation – they are all inter-connected and impact upon each other. However, to ensure this project adds value, it is proposed that it will primarily focus on (i) the outcome principles needed for sustainability (the 'WHAT') and (ii) the process / governance principles that enable these outcomes (the 'HOW').

The economics around who pays for desired outcomes, especially the real costs linked to different outcomes, needs to be considered when developing these principles. The principles also need to be able to stand the test of different politics and be intuitively acceptable within wider society, acknowledging that views on what is acceptable are diverse and can change over time. We note that the way ethical principles are applied by private utility companies may still need to worked up, especially where conflicts arise with wider societal views.

Proposed Strawman for Sustainability Principles

The following Strawman below provides a 'starter for ten' of what these ' WHAT' and 'HOW' principles might look like.

The seven enabling principles – the 'HOW' principles (4-10) in the strawman - cut across the different outcome principles – the 'WHAT' principles (1-3). The enabling principles are not of equal importance for each outcome principle. For example, the consumer/citizen lived experience is more relevant to the outcome principle on fairness/people centred services than it is to the principle on protection of natural capital. We acknowledge that some principles can be hard to grasp and pin down (e.g. systems thinking) and a perfect solution may not be possible. However, we would like to include these approaches due to the level of the challenges faced. And the fact that reframing issues in this way may lead to new and exciting opportunities and ways of thinking!

Cross cutting factors		Sustainability principles this project proposes to explore further	
Ethics (eg integrity)	Principles of good regulation - approaches / ' hygiene' factors (eg risk based)	**Principles that guide outcomes for strategic behaviours – the 'WHAT'**	
		1.	Fairness and people centered services - just transition, local / regional / place-based fairness, inclusion and diversity, vulnerability
		2.	Protection of natural capital, net zero and wider environmental protection – net zero, biodiversity and wider environmental principles
		3.	Resilience and future focus- climate impacts, reliable future systems, wellbeing of future generations and intergenerational equity
		Enabling/process/governance principles – methods to achieve outcomes – the 'HOW'	
		4.	Systems and joined-up thinking – including clarity on roles, responsibilities, and accountabilities (for companies, regulators etc)
		5.	Dynamism and flexibility - to deal with change and uncertainty at the scale and pace needed
		6.	Circularity and system efficiency
		7.	Engagement, participation, diversity and collaboration – internally and externally
		8.	Consumer / citizen lived experience and evidence base
		9.	Future focus / long-term thinking
		10.	Incorporating spatial impacts – understanding local / regional / global impacts and related complexity

4. Relationship between Principles that Guide Behaviours and Governance and Principles Enshrined in Law

The principles proposed in this project are for the purpose of guiding behaviours and decision-making in different organisations, including companies, regulators and policy makers. They are largely cultural, operational and organizational principles. However, various principles also exist which are set out in law, either UK law or international law (e.g. by the World Trade Organisation, in human rights legislation, or in taxation treaties).

When developing and discussing organizational principles it is important to keep two issues in mind. Firstly, these principles need to be seen against the background of the principles already existing in law. Legal principles can impact on organizational principles as they may already cover, provide guidance on or prevent some of the aspects we may be seeking to address with the organizational principles.

Secondly, it is important to recognize that actors will often apply legal principles foremost with a legal mindset[3] – influenced by cultural interpretations - but organizational principles foremost based on cultural interpretations. Analysis for Sustainability First by Slaughter and May has indicated that decision makers often have more flexibility in interpreting the law in terms of sustainability in these sectors than they may think[4].

5. Outcome Principles – the 'WHAT'

Annexes 1- 3 provide separate briefings on each of the proposed outcome principles: fairness and people centered services; protection of natural capital, net zero and wider environmental protection; and resilience and future focus. They provide a starting point for our collaborative future work. They seek to build on current activity and thinking by different actors in that space (noting that none of this is brand new) and further develop a common understanding / working definitions of each principle for the project.

Each Annex follows the same structure. It begins by providing an overview of the current situation in that area, the desired outcomes sought and what the principles may mean to different actors (eg policy makers, regulators, companies and investors) given they may take a different form depending on the context and who is applying them. To help make the case for action, each Annex then considers why that area is important and why it matters. The barriers to these issues being tackled are then explored. The enabling principles in that area are then assessed, recognising that there are multiple aspects within each area, some of which are better understood than others.

Annex 4 provides a short overview of the relevant aspects of the Environment Act, as it relates to environmental principles.

6. Overlaps and Linkages Between Outcome Principles

None of the areas covered in Annexes 1-3 can or should be viewed in isolation. Rather, they are – at times closely – linked with each other and overlap in the issues they seek to address. However, we believe each area provides an important viewpoint on the complex issues we are dealing with and thus merits their own investigation. This section explores these interlinks and overlaps.

The area of "**Protection of natural capital, net zero and wider environmental protection**" clearly overlaps with the principles on fairness and resilience. For clarity, we should stress that this area considers fairness in terms of the intrinsic value of nature and giving ecosystems and the wider environment a voice, and thus can be understood as exploring nature as a stakeholder in its own right. There is an important link around questions of who pays for environmental protection and enhancement and who has what responsibility when implementing schemes.

The principles around natural capital are also inherently about longer-term impacts. However, they are concerned with including what have traditionally been seen as externalities to the financial bottom line (e.g. emissions, biodiversity impacts etc) whereas the area of "**Long-term resilience and future focus"** focuses on the long-term delivery of core utility services. There are also obvious links between climate adaptation and adaptive planning – and therefore both the natural capital and resilience principles.

Clearly inter-generational equity is one dimension of fairness (and there is a need to think about how existing inequalities might play out in future). However, we have chosen in the "**Fairness and people-centred services"** principle to focus on the short- to medium-term issues

[3] Whereas European law is 'Napoleonic' and takes account of what law makers intended, UK law is not purposive and doesn't take account of intent (although it can take account of statements made in the passage of a Bill through Parliament).

[4] Slaughter and May: Notes on Sustainability Law and Regulation in the Utilities Sector: https://www.sustainabilityfirst.org.uk/images/publications/fair_for_the_future/Notes_on_Sustainability_Law_and_Regulation_in_the_Utilities_Sector.pdf .

around fairness as society currently faces them, while in the resilience area we focus on the medium- to long-term concerns of fairness, with a focus on infrastructure and service provision. This is a key aspect of sustainable thinking but is still underrepresented in decision-making and poses different challenges than current fairness issues, for instance short-term bias and uncertainty. Nonetheless, discussions around short- to medium-term fairness will be linked to longer-term fairness discussions.

Despite these overlaps, we have chosen to keep resilience as a separate area of outcome principles because it allows for the "future focus" to be given a particular emphasis.

7. Trade-offs, Synergies and Co-benefits

As noted above, many of the issues involved when thinking about sustainability in essential services can involve trade-offs. A principles approach can help navigate these issues to avoid false dichotomies and identify where the greatest synergies and co-benefits may be so that interests can as far as possible be balanced and aligned. In doing so, it can support the culture change needed to secure a stronger focus on delivering public purpose and value. In sectors such as energy, water and communications, some of these potential trade-offs include the following.

- **Time**: short v long-term interests; current v future interests; speed v quality v durability etc
- **Who**: minority v majority; consumer v citizen; individual responsibility v collective responsibility etc
- **Geographical**: local v national v global; rural v urban; north v south etc
- **What**: social v environmental v economic; outcome A v outcome B etc
- **Impact**: breadth v depth; financial v social wellbeing etc; rights v responsibilities etc

Please note that this list is by no means exhaustive and that most of these trade-offs sit on a spectrum. This project will explore some of these issues, and the links between ethical, cultural and legal approaches to trade-offs, shortly.

8. Project Next Steps

This Paper is designed to stimulate discussion as we progress the project. Annexes 1-3 are a stage in an iterative process and are very much 'work in progress.' As the principles cover wide and complex sets of issues, our aim is to identify and focus on the gaps that exist in current work and where the project can add most value.

We will collaboratively identify problem areas, decide upon priorities, explore existing barriers and will finally, taking account of all stakeholders' views, develop a revised set of sustainability principles. Our definitions /categorisation may well change over the course of the project. As the principles are developed, we will seek to ensure that these are as short, simple and accessible as possible – we are not there yet! We also recognise that stakeholders may have different levels of familiarity with sustainability or interpret some of the terms involved in different ways. As the project progresses, we will seek to develop a common language.

Our next steps will be to:

a) Build our understanding about how sustainability principles are seen through an ethical/philosophical, legal, and cultural change lens, and how these different perspectives interact. On 3rd December, we will be holding a joint workshop with the British Academy to explore how these different approaches might deal with some of the trade-offs that the energy, water and communications sectors are facing;
b) Hold a high level roundtable with representatives from key stakeholders, including cross-party politicians, civil society groups and government actors, to consider this strawman and how best to build support to mainstream sustainability principles approaches;
c) Test the strawman with key civil society groups to ensure the principles developed reflect their priorities, resonate with their concerns and are framed in a way that they can relate to in language that is readily accessible; and
d) Develop a selected number of 'use cases' / case studies to illustrate the current situation in a given area and, crucially, to identify the future changes needed. These use cases will also enable the development of concepts to measure the success of different principles. They will be used to "test" and refine the principles we examine with a wide range of stakeholders in essential services, including government, regulators, companies, academics and civil society groups. Hence, over the course of the project, we will further define these terms and what we want to achieve. A list of possible use cases is at **Annex 5**.

Annex 1: Fairness and People-Centred Services: Proposed Outcome Principle

1. Background

This Note covers the proposed outcome principle around 'Fairness and People-Centred Services', and the most relevant enabling principles, as highlighted in the covering 'Framework and Strawman' paper. Overlaps between this area of principles and the other two areas of outcome principles are covered in the main 'Framework and Strawman' paper.

Section 2 introduces the scope of this area of principles. Section 3 provides an overview of the current situation in this area to establish a common understanding of the baseline the project is starting from and to explain why we consider there is a need for further action. In section 4 we summarize our current understanding of these issues and the desired outcomes sought before explaining associated enabling principles in section 5.

This area of principles covers consumer, citizen and community vulnerability including affordability of essential services, just transition issues, local and regional place-based fairness, consumer protection, inclusion and accessibility of essential services.

It aims to focus on the principles that can be used by decision makers not only to meet the fairness challenges of today but also of the future.

It recognises that perspectives on fairness can vary for different stakeholders. We need to consider 'fair for who?' - individual customers, groups of consumers or citizens, communities and shareholders, for example.

The understanding of what is 'reasonable' or 'fair' will also likely vary dependent on the circumstances and will evolve over time.

Fairness is a complex and wide-ranging area. The key issues we will explore as part of this principle are:

a) What can different stakeholders reasonably expect as the minimum service outcomes, e.g. 'what should core minimum service/baseline fairness' be? Should there be a universal service obligation and if so for what? Is a "rights"-based approach the right way forward? Are we trying to achieve equity or equality? What is 'reasonably practicable' for companies to deliver and how might this change over time given technological changes?

b) How do we make the trade-offs between the needs of and impact on individuals, different customer segments, society and nature?What weight do we give to the views and interests of different stakeholders and why?

c) How do we establish fair incentive frameworks, e.g. should the polluter pay for harm or be paid to change their behaviour? What incentives are fair? Should incentives be focused on maximizing benefit and/or minimizing harm? What about delivering behaviour change?

d) How should we pay for fairness? E.g. cost-reflectivity, cross-subsidy, shareholder contribution, taxation or a mixture of the above?

e) What should the boundaries of different companies' responsibility be? E.g. what role should companies that use private capital to deliver public value play in delivering fairness including what level and scope of support should be provided? Should the focus be on minimizing harm, or maximising public value? Should companies only focus on areas within their direct functions or where they are best placed to make a difference? And what is a reasonable role for customers to pay for?

2. Rationale: Why is an Outcome Principle in this Area Important?

Over the course of the last few decades decision makers in essential services have had to grapple with a large number of fairness related issues. In doing so they have defined, interpreted and responded to fairness challenges differently, even within the same organisations. This has led to different and sometimes unequal outcomes for consumers, citizens and communities.

The Covid-19 pandemic has exacerbated vulnerability and inequality and the importance of the lived experience. The future is uncertain with wider social, environmental, economic and technological change, including the transition to net zero, likely to bring fairness issues further to the fore.

Historically there have been various, often difficult debates around the concept of 'fairness' in the water, energy and

telecommunication sectors[5] [6] [7], essentially relating to differing ideas about what it means to be 'fair':

- **Equality** – everyone has the same opportunity to access essential services, e.g. everyone can access the same broadband speed at the same fee. This perspective doesn't take account of issues such as differences in income, locality, capability etc and can lead to differential outcomes.
- **Equity** – everyone gets the same outcome even if they cannot access the service on their own, e.g. low-income energy consumers are subsidised by the more affluent.
- **A 'rights'-based approach** - access to essential services can be seen as an essential human right – e.g. UN General Assembly and the Human Rights Council view that access to water is a human right.[8] The Sustainable Development Goals (SDGs) 6, 7 and 10 (Clean Water and Sanitation, Affordable and Clean Energy, Reduced Inequalities) relate to these issues. Rights are often reflected in legislative requirements to protect certain groups/those in vulnerable circumstances – e.g. the requirement to make 'reasonable adjustments' for disabled people to alleviate disadvantages. [9]
- **A risk-based approach** – focuses on minimising the worst harm. This can apply to people, as well as planet.
- **A benefit maximisation approach** – how this is framed (benefits to individuals, communities or society) can clearly lead to different results. The consideration of co-benefits can also lead to different assessments of what is fair.
- **Who pays**? – how costs are apportioned is another dimension of fairness, examples are cost-reflectivity (where people pay the cost of the service that they use) or questions about who pays for welfare and environmental costs (bill payers or tax payers) or shareholder contributions. The common approach of customer cross-subsidisation to fund financial support to help those struggling to afford their bills has reached its limits in some areas due to rising affordability challenges against the background of increasingly limited resources.[10]

3. Why this Area of Outcome Principles Matters

Various stakeholders and society as a whole may face harm if parts of society cannot access the essential services they need in a timely way. A lack of fairness can have different impacts for different stakeholders:

- **Individual/household impacts**: e.g. a lack of energy/water/telecommunications can result in harm to health (physical and mental), social exclusion e.g. inability to participate fully in education, social activity, and can negatively impact wider affordability resulting in 'going without' other essentials, debt with wider knock on consequences, as well as missed opportunities e.g. inability to access education, employment and market opportunities.

- **Citizens and society/communities** e.g. due to individual health impacts[11]; lowered educational attainment can exacerbate childhood poverty, risking children's economic wellbeing in later life; technological changes supporting net zero pathways (e.g. Electrical Vehicle (EV) usage) require different modes of customer engagement, risking new or exacerbated fairness issues[12]; societal stability may be at risk as quality of social relations is positively correlated to access to energy services[13]. The impacts will vary dependent on the role the actor is playing

[5] https://www.ofgem.gov.uk/publications/ofgems-regulatory-stances

[6] https://www.ccwater.org.uk/wp-content/uploads/2021/05/Independent-review-of-water-affordability.pdf

[7] https://www.ofcom.org.uk/phones-telecoms-and-internet/information-for-industry/policy/fairness-for-customers

[8] https://unece.org/environment-policy/water/areas-work-protocol/equitable-access-water-and-sanitation

[9] https://www.equalityhumanrights.com/en/secondary-education-resources/useful-information/understanding-equality

[10] https://www.sustainabilityfirst.org.uk/publications-expert-viewpoints/237-given-covid-19-and-netzero-what-should-the-medium-to-longer-term-approach-be-to-ensuring-affordability-of-essential-utility-services

[11] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/357409/Review7_Fuel_poverty_health_inequalities.pdf

[12] https://www.cse.org.uk/downloads/reports-and-publications/policy/energy-justice/smart-and-fair-phase-1-report-september-2020.pdf

[13] https://www.sciencedirect.com/science/article/pii/S2214629618310004

(customer/citizen) and the activity they are undertaking and there will be different distributional impacts.

- **Company employees**: e.g. what is fair for employees to expect and employers to provide i.e. absence of fair wages can exacerbate poverty and significant pay differentials can entrench inequalities; employees themselves may be vulnerable and require additional support services; what can they expect by way of training and support in stressful situations and what are their expectations of a fair company they can feel proud of and therefore want to work for?

- **Companies / Investors**: e.g. risk of negative reputation, adverse effect on trust and social licence to operate, increased regulatory scrutiny, non-compliance fines, difficulties with retention/ recruitment, fair returns for risk undertaken.

Below, we set out some areas we believe could be addressed using 'fairness' outcome principles. A focus on people-centred services makes it possible to take account of different lived experiences for all stakeholders in society and is therefore paramount in all these areas:

- **To achieve a 'just transition' a societal long-term view of fairness is paramount. Solutions need to consider not just the short-term but also the longer-term opportunities, risks and benefits. And community as well as individual impacts, including issues of regional fairness and the impacts of the transition on employment, particularly in areas reliant on fossil fuels.** Much social support has evolved piecemeal over time leading to inefficiencies and complexity for consumers, rather than considering a more strategic approach. There is scope to improve horizon scanning and identify new opportunities to deliver benefits and co-benefits.

- Approaches need to **address the fundamental causes of fairness/unfairness 'not just treat the symptoms'**, recognising that not all causes are within each actors' control, e.g. fuel poverty policy is arguably for government not regulators, companies have limited control over household incomes. This would help to provide enduring solutions to problems. This requires a shift from reactive to proactive behaviours by all parties.

- **Approaches need to consider local/regional/place-based fairness:** A lack of fairness can have different impacts for different regions. This might depend on for example:
  - Rural vs urban differences e.g. distribution of high-fibre cables; different starting points between the south-east of England and the north ("levelling-up" agenda)
  - Variable resilience of different communities e.g. at flood/not at flood risk
  - Distribution of customers in vulnerable situations and therefore variable need across different regions and communities
  - Distribution of current and future employment opportunities
  - Availability of wider infrastructure e.g. transport and support services
  - Distribution of different housing types and tenures e.g. which may influence ability to access new technologies and participate in new markets
  - Local and regional economic policies

- **Delivering fairness** often needs multi-sector, collaborative approaches which can be more expensive to initially set up (though more cost effective overall), complex and time consuming to deliver. Again, government and regulators can play a key role in both enabling and hindering such activity.

For all of the above areas it is crucial to **be clear about the often very different understandings of fairness underpinning them** and the resulting contradictions. For example, some decision makers consider cost-reflectivity to be a fair policy e.g. prepayment customers initially paid more for their energy as it costs more to serve them. Other parties thought it was unfair for the poor to pay more and attitudes of what is acceptable have adjusted over time. Some regions which are more expensive to serve receive a cross-subsidy from central taxation. Some customers consider this unfair as those households have chosen to live there.

4. Common Barriers to this Outcome Being Addressed

Whilst rapid shifts have been seen in the sectors over the last year and the status quo may be somewhat in flux, **common barriers** to these issues being adequately

addressed can be linked to what we have termed the 4 "i's" [14], which we have described in more detail in the covering 'Framework and Strawman' paper:

- **Interpretation and implementation**: Currently there is no common understanding of what we mean by 'fairness ' (different ethical and political views on what the ideal outcome is), which has led to inconsistent approaches and delivery of fairness depending on the focus (social, environmental or economic) and between regions, companies and sectors making it sometimes difficult and in the long-term more costly to target support and reach those in need and difficult for them to know what support is available and how to access it. A common understanding of fairness could improve clarity about the problems that need to be solved, facilitate coordinated solutions, make trade-offs between different interests easier to understand and explain and make impacts easier to measure. Consideration is needed of the degree to which there is already a common approach to addressing fairness issues across different organisations.

- **Influence and interpretation:** There is a lack of shared understanding about needs, barriers and benefits and how to help and the associated leadership skills required;[15] weak understanding of monetary and non-monetary value to non-customer parties of supporting fairness and people centred services (how to measure social value is still in its infancy); benefits are often indirect (e.g. the link between diversity and profitability).

- **Interaction:** A lack of multi-sector, collaborative approaches to decision-making can sometimes lead to inconsistent approaches and a lack of transparency.

- **Implementation:** Decision-makers also suffer from a lack of understanding of powers and vires and often no clear view on company boundaries of responsibility. A lack of clear definitions, and the qualitative aspect of some social issues, can exacerbate this and result in uncertainty regarding responsibilities for companies and inability to enforce them for regulators and challenges for all parties around measurement.

Also, what is reasonably practicable and what is deemed fair by different parties varies over time, it is therefore important to keep these issues under review; the current debate on what constitutes a 'just transition' is testament to this.[16]

5. Which Enabling Principles are Most Relevant for this Area of Outcome Principles?

In this area, we consider the following enabling principles most relevant as they aim to address the barriers identified in the previous section:

- **Engagement, participation, diversity and collaboration** – internally and externally for policy makers, regulators, companies, investors
  - to address the lack of discussion/learning from one another and the public through cross-sector debate about what 'fairness' means;
  - to help break out of siloed thinking;
  - to enable discussion of boundaries of responsibilities and clarify vires for decision-makers; and
  - to co-create solutions to complex, wicked issues.

- **Consumer/citizen lived experience and evidence base** - to enable policy makers, regulators, companies to
  - include information on needs beyond the customer/household/bill payer perspective;
  - increase understanding of (changing) needs, barriers and benefits and how to help;
  - engage with diverse stakeholders and enable them to get their voices heard; and
  - to collaboratively debate what 'fairness' means for the sectors, thus ensuring backing of the public and future withstanding of the "test of different politics".

- **Systems thinking** - across the sectors to

[14] 4 "i's": how different actors and outcomes are influenced by actions and behaviours; how they interact; how they interpret the law and regulation; and how this is implemented
15 https://www.sustainabilityfirst.org.uk/images/publications/inspire/Energy%20for%20All-%20Innovate%20for%20All%20(summary).pdf

[16] https://www.sustainabilityfirst.org.uk/publications-briefing-papers/151-social-and-distributional-impacts-of-decarbonisation-and-climate-adaptation-in-the-uk

- help clarify interdependencies of fairness issues and how they influence each other;
- clarify roles and responsibilities;
- improve understanding who to engage on what issues and then facilitate a common understanding of fairness on any given issue by engaging with relevant stakeholders and understanding their perspectives on fairness, facilitating and incentivising collaborative working; and
- improve communicating decisions.

Annex 2

Protection of natural capital, net zero and wider environmental protection: Proposed Outcome Principle

1. Background

This Note covers the proposed outcome principles around 'Protection of natural capital, net zero and wider environmental protection', and the most relevant enabling principles, as highlighted in the covering 'Framework and Strawman' paper. Overlaps between this area of principles and the other two areas are covered in the 'Framework and Strawman' paper.

Section 2 provides an overview of the current situation in this area to establish a common understanding of the baseline the project is starting from and to explain why we consider there is a need for further action. In section 3 we summarize our current understanding of these issues and the desired outcomes sought before explaining associated enabling principles in section 4.

2. Rationale: Why is an Outcome Principle in this Area Important?

This area seeks to identify principles that can be used to guide strategic decision making for the protection and enhancement of natural capital, net zero and wider environmental protection and enhancement.

The main high-profile focus of environmental action and adaptation planning is currently on climate change and particularly carbon emission levels. However, the Dasgupta review is only the latest of a series of studies which show how very important **the natural environment** is, both globally, but also nationally and locally. Biodiversity and habitat loss are therefore also rapidly going up the agenda.

Clarity and practical guidance are needed about how existing and new **environmental principles** need to be and can be applied in the energy, water and comms sectors to protect and enhance natural capital and reduce emissions going forward. These principles also need to be able to withstand the "test of different politics". Such principles, some of which are enshrined in the Environment Act include:

- The Precautionary Principle
- The Polluter Pays Principle (which links to the fairness question of who pays)
- Principles of circularity
- Principles, to be worked up, around the use of natural capital analysis and thinking
- Principles, to be worked up, around sustainable procurement and supply chains

The **application and applicability** of these principles will inevitably **differ between the three different sectors**, water, energy and telecommunications. We would note that the time horizons for change differ between sectors, with water being the longest and telecommunications the shortest.

Our work in this area will try to improve the understanding of these differences and consider concrete tools for their application by decision-makers. A "**common currency**" is necessary to enable their application in different circumstances and aid decision-makers in cases of complex trade-offs. As noted in the covering 'Strawman', there is also a very important difference between principles enshrined in legislation and sustainability principles used in organisations.

3. Why this Area of Outcome Principles Matters

We acknowledge there are various existing relevant principles, which are currently used and /or discussed in different circumstances, notably:

- Various parts of the utility industries are using the **UN Sustainable Development Goals** as an overarching framework for action - particularly 14/15 (biodiversity), 12 (circularity). But there is **as yet no link between these goals (and wider ESG approaches) and** the principles which underpin **key trade-offs and 'wicked issues'**.

- One possible approach /principle to provide support for solutions is **Natural Capital** assessment: Assigning a value to the services environmental areas deliver to nature and humans. There are three elements to this: for formal accounting purposes, to guide decision-making and as an explanatory and pedagogical tool.
- The new **Environment Act** includes several environmental principles (see Annex 4)[17]. However, in contrast to former EU legislation, these will not be set in law, but rather be based on a separately published interpretation by government and therefore be likely subject to regular changes. Moreover, only ministers need to pay due regard to this interpretation when developing policy, it is of no direct consequence to regulators and administrative decision-makers. Therefore, it is crucial to flesh out the principles that were also identified as gaps by this project to make them workable and provide decision-makers with "backing" for difficult trade-offs as well as consistency moving forward.
- The **Carbon Border Adjustment Mechanism (CBAM) proposed** by the EU aims to prevent carbon leakage by imposing carbon prices on selected imports.[18] Implications to the utilities sector need to be understood and principles may be useful in guiding future decisions that are impacted by the CBAM.

This project seeks to build on these principles, refining and fleshing them out for the utilities sector. With this in mind, we set out below some initial analysis, and identify a number of gaps we believe are worth addressing using outcome principles:

- **Biodiversity, e.g. terrestrial, aquatic and marine environments:** Coordination of interventions, e.g. between water utilities, land management and flood defence or electricity cooling and discharges back into water, are paramount, but currently individual approaches dominate the landscape, fostered by little clear regulatory action. Importantly, impacts occur within the UK, but also abroad along supply chains. Often, impacts outside the UK can have bigger effects on globally sensitive species and ecosystems (e.g. rare earths). A particular, but far from the only, concern for water utilities is the poor state of the **aquatic environment** – freshwater and marine.

- **Wider environmental protection:**
  - **Supply Chains:** While there is regulation of many of utilities' direct emissions, focus on emissions resulting from supporting business activities (e.g. construction dust, generated transport) and supply chains (e.g. use of sustainable timber) is insufficient.
  - **Circular Economy, e.g. waste:** Even though there are quite strong waste disposal regulations and tax incentives to reuse aggregates, utilities are not alone in not facing the full environmental costs of waste. Net financial positives of waste reductions are not leveraged by organisations. Circular economy thinking in particular has the potential to aid sustainability efforts of UK utilities. Product lifecycles and indirect impacts of, for example, Polyethylene (PE) pipes, are not fully understood.
  - **Local environmental effects** are often not fully integrated into decision-making (e.g. air quality, amenity, noise). Such effects range from construction noise and dust (air quality) to the dis-amenity of overhead power lines in natural parks.
  - **Environmental systems** are an intricate interplay of processes and responses to negative and positive stimuli, many of which impact upon each other and can display complex dynamics, including tipping points/irreversibility. All of these are negatively impacted by human behaviour. Utilities play an important role in this system and a better understanding provides opportunities to improve sustainability outcomes.
  - **Carbon emission targets and climate adaptation**[19] are intricately linked with above wider environmental issues, requiring a holistic environmental approach to Net Zero. A holistic approach which includes these wider environmental effects into long-term environmental planning and adaptation is paramount to achieving net zero goals and thus preventing

[17] Principles enshrined in the Environment Act are: Integration principle (ministers to look for opportunities to integrate environmental protection in other areas of policy making), prevention principle, Precautionary principle, Rectification at source principle, Polluter pays principle

[18] https://www.ft.com/content/de7d12e2-0d04-43d4-b38c-cf795854a4a2

[19] 4 of the 8 areas the adaptation committee recently identified needing urgent action on adaptation were in the natural environment: https://www.theccc.org.uk/publication/independent-assessment-of-uk-climate-risk/

tipping-points. Additionally, affordable pathways to emissions reduction to meet net zero goals are crucial.

- **Human health impacts from air pollution and certain chemicals** (such as lead and mercury from supporting business activities/supply chains). Air pollution alone has severe detrimental health impacts across all age groups.

4. Common Barriers to this Outcome Being Addressed

Possible **barriers** to these issues being adequately addressed can be linked to what we have termed the 4 "i's" [20], which we have described in more detail in the 'Framework and Strawman' covering paper:

- **Interaction:** Many of the above areas interact, in quite subtle ways. For example, whilst both, the water and electricity sectors are tackling behaviour change regarding water and energy use, the important coordinated approach is currently missing. Furthermore, environmental measures by individual utilities can also impact citizen's individual behaviours - positively and negatively.
- **Implementation:** While there is a lot of discussion in particular about how to reflect the issues around the aquatic environment in water regulation, there is as yet little clear action. Other barriers to action include the challenges of getting lasting behavioural change.
- **Influence:** There is more work to do to fully understand local environmental effects, their role within environmental systems and their interaction with wider behavioural change. There is also an issue around stranded assets and the role of incumbents and other vested interests in shaping net zero pathways (eg in the debate on UK domestic heat decarbonisation).
- **Interpretation:** The utility industry, especially the water sector, needs to develop their understanding of natural systems' responses to pollution, in particular from utility operations. The aim is to stay below key boundaries to avoid unacceptable risks; however, some boundaries have already been crossed for climate change, land use changes, biodiversity and certain chemical pollutants. [21] Thus, there is a need to develop an understanding of how to internalize planetary boundaries and tipping points into economic decision-making. Circular economy thinking has not fully been applied to UK utilities. Mindsets are currently not sufficiently considering positive financial opportunities of waste reductions.
- **Interpretation and Implementation:** Thinking about how to use natural capital for utilities is still in its infancy. This situation is a barrier to well-functioning markets, e.g. when making investment decisions, and to institutions successfully managing natural resources, e.g. via investment incentives.

5. Which Enabling Principles are Most Relevant for this Area of Outcome Principles?

Once problems and barriers have been established, we will explore enabling principles and tools to support decision makers when using the outcome principles for their decision-making. In this area, we consider the following enabling principles most relevant:

- **Incorporating spatial impacts** – spatial differences and interdependencies need to inform the application of principles within each sector;
- **Circularity and efficiency** – a change of mindset is necessary to reduce environmental impacts via change of production and consumption;
- **Dynamism and flexibility** – to inform adaptive planning and resilience planning towards external shocks (such as was experienced due to Covid 19)[22]
- **Future focus** – to guide long-term investment and adaptative planning, currently there is a gap between potential future risks and planning; [23]
- **Consumer/citizen lived experience** – this needs to be understood and taken into account to get the behaviour change needed to enable the delivery of environmental goals; and
- **Systems approaches** - to avoid underplaying or misunderstanding key interdependences. Whole systems approaches and greater co-ordination are key to protecting and enhancing eco-systems and delivering net zero and a just transition.

[20] 4 "i's": how different actors and outcomes are influenced by actions and behaviours; how they interact; how they interpret the law and regulation; and how this is implemented

[21] https://www.eea.europa.eu/soer/2020/soer-2020-visuals/status-of-the-nine-planetary-boundaries/view

[22] https://www.theccc.org.uk/publication/2021-progress-report-to-parliament/

[23] https://www.theccc.org.uk/wp-content/uploads/2021/07/Independent-Assessment-of-UK-Climate-Risk-Advice-to-Govt-for-CCRA3-CCC.pdf

Annex 3 - Resilience and Future Focus: Proposed Outcome Principle

1. Background

This Briefing Note provides a starting point for our collaborative future work. The Note covers the proposed outcome principles around 'Resilience and Future Focus', and the most relevant enabling principles, as highlighted in the covering 'Framework and Strawman' paper. Overlaps between this area of principles and the other two areas are discussed in the 'Framework and Strawman' covering paper.

Section 2 provides an overview of the current situation in this area to establish a common understanding of the baseline the project is starting from and to explain why we consider there is a need for further action. In section 3 we summarize our current understanding of these issues and the desired outcomes sought before explaining associated enabling principles in section 4.

2. Rationale: Why is an Outcome Principle in this Area Important?

In our framework note we define this area of outcome principles as spanning the issues of

- wellbeing of future generations and intergenerational equity,
- reliable future systems,
- climate impacts.

Given the essential service nature of utilities and the long-term nature of infrastructure investment the concept of "resilience" is important. While resilience operates at many levels (including near term planning and community / social aspects), our main focus under this principle is on the long-term resilience of the monopoly infrastructure providers.[24] Resilience is key if the system is to be **robust to future shocks** (such as climate change) and has the **capacity to deal with changing demands** (such as electrification of transport and heat). Resilience in this sense includes planning for future new assets as well as the use and adaptation of existing assets. It also concerns planning for and adapting to societal and individual behavioural changes, due to climate change adaptation or other trends (sharing cars, increase in home office work, communities engaging in energy production and distribution etc).

Resilience therefore concerns all players within the sectors, albeit in different ways: citizens and consumers, communities, companies, regulators and policy makers.

At the heart of this is ensuring that the **needs of future consumers and citizens** will be met and are given appropriate weight in policy and regulatory decisions. This is further complicated by the fact that the needs of future consumers/citizens and what they value may be different to those of people today (with climate change the past is not necessarily a good guide to the future) and also differ within generations (eg those who live in areas prone to flooding face different risks to those not in flood plains/ at risk of coastal erosion etc).

There are also difficult decisions that have to be taken around ensuring that the **costs of system development (and meeting net zero) are fairly shared between generations**. Given significant investment is necessary whilst there is also significant uncertainty about future pathways towards net zero these inter-generational trade-offs become more difficult. This is exacerbated by the fact that there is **no clear view of what fairness means in this context**.

3. Why this Area of Outcome Principles Matters

We set out below some initial ideas for problems we consider this outcome principle can help address:

- **Wellbeing of future generations and inter-generational fairness:** It is important to **ensure the needs of future consumers and citizens are met** – recognising that energy, water and communications are essential services, part of critical national infrastructure and key to enabling the delivery of net zero. The long-term nature of the investments involved can make these issues more complex.
- **Investment decisions to support long-term reliability:** In taking decisions there is a risk that regulators place **an undue focus on short term bill impacts** even though there is always a trade-off that needs to be made between short-term bill impacts and adverse impacts for future consumers and citizens (system reliability and/or future bill increases, including impacts caused by climate change). The

[24] This is particularly important for monopoly providers - See, for example, https://www.ofwat.gov.uk/wp-content/uploads/2019/12/PR19-final-determinations-Securing-long-term-resilience.pdf

focus on resilience aims to support the fundamental change of mindset in this area that is already starting to take place and help address the associated issue of '**who pays**' (bill payers, tax payers, cross-subsidies between people in different geographies etc).

- **Adaptive planning to mitigate climate impacts:** New threats will continue to emerge whether around climate impacts, cyber or pandemics which point to the need to think creatively about how to ensure the long-term resilience or robustness of the system.

4. Common Barriers to this Outcome Being Addressed

Possible **barriers** to these issues being adequately addressed can be linked to what we have termed the 4 "i's" [25], which we have described in more detail in the 'Framework and Strawman' covering paper:

- **Implementation:** All players have inherent biases that lead them to focus on shorter term impacts whether motivated by election cycles, media headlines or short run profit announcements. This is what Mark Carney has termed the Tragedy of the Horizon in the context of climate change. Events, such as the pandemic and its impacts on household budgets for a significant proportion of the population, can reinforce these biases. This is then exacerbated by significant uncertainty about the future. Planning based on central forecasts may cause asymmetric/ unfair future risk distributions. Potential environmental tipping points could put us on an entirely different trajectory.
- **Interpretation:** While regulators have duties to protect the interests of future consumers it is not always clear what this duty means in practice (including who represents their views?). There is no common understanding of what inter-generational fairness means, hence also no established regulatory approach for considering inter-generational equity. In thinking about the long-term the need to reflect on citizen and community interests – not just consumer interests – becomes increasingly important. This is not traditionally seen as the regulator's role but is central to the concept of the "well-being of future generations" considered in the round. There are often **trade-offs** between outcomes where resilience is just one dimension that needs to be weighed against other factors such as cost, performance, visual and environmental impacts etc. These trade-offs are often judgement calls rather than something that can be analysed or decided on the basis of evidence and hence can be particularly hard for economic regulators. Principles can help provide a framework for making such trade-offs.
- **Influence:** Vested interests can act as a barrier to delivering resilient outcomes, particularly if change threatens business models, income streams or leads to asset stranding.
- **Interaction:** Siloed thinking exacerbates the above barriers as it prevents players from collaborating and learning from each other which is increasingly important in a longer-term context.

5. Which Enabling Principles are Most Relevant for this Area of Outcome Principles?

The resilience principle is inherently tied in with the "**future-focus / long-term thinking**" enabling principle – ensuring that the well-being of future generations is given due weight in decision-making and inter-generational fairness. Other key enabling principles are:

- **Systems and joined-up thinking**: dealing with major structural changes in these industries and managing the uncertainties involved requires a broad vision, looking across sectors and understanding direct and indirect risks and dependencies/cascade risks;
- **Dynamism and flexibility**: dealing with change and uncertainty at the scale and pace needed. This will involve new, creative more adaptive approaches to regulation drawing on learning from adaptive planning approaches to climate adaptation.
- **Engagement and diversity** (eg through board composition and governance processes) which can help in providing a longer term lens and navigating through uncertainty. Spatial issues can also impact on resilience (eg in coastal areas, flood plains etc) and hence it is important that local voices are heard.
- **Circularity:** The extent to which circularity is embedded in future delivery approaches may also impact on resilience (eg in the case of rare/expensive metals or long supply chains being disrupted by climate impacts).

[25] 4 "i's": how different actors and outcomes are influenced by actions and behaviours; how they interact; how they interpret the law and regulation; and how this is implemented

There are also some tensions that may need to be explored with other enabling principles:

- Efficiency remains important but may need to be viewed differently in a world in which spare capacity may be key to providing resilience and managing uncertainty.
- Engagement is important but will require creative approaches to bring in the views of future consumers/citizens who may not yet even be born – relying too heavily on the lived experience of today's customers risks a focus on near term actions alone (short-term bias).

Annex 4

The Environment Act: Environmental Principles and Targets

1. The UK Environment Act received royal assent on November 9 2021. It is a major piece of legislation, with many implications for sustainability principles. These include creating the legal basis for UK principles, the detail of which will now be clarified by the minister in a separate process which the Act sets in train. An important late change to the Act was the inclusion of a requirement for a progressive reduction in combined sewer overflows, following amendment by the House of Lords.

2. Structure of the Act in relation to environmental principles:

- Future environmental law will be made up of two strands, law retained from EU law after Brexit and new laws including the Environment Act.
- EU environmental law contains explicit reference to environmental principles, the Environment Act aims to update those principles and recodify into English law (environmental law is a devolved matter, e.g. there is a Scottish version of the Environment Act).
- Environmental Principles are considered in the following ways in the Environment Act:
    - A list of environmental principles (see details below) is set out, but no explanation is provided in the Act itself.
    - Interpretation of the environmental principles and how they should be applied is to be given by the Secretary of State via a draft policy statement.
    - There is nearly no parliamentary control over this policy statement beyond a process of laying the draft policy statement before Parliament as part of which there is a possibility of Parliament either passing a resolution or a committee making recommendations, which requires the Secretary of State to "produce a response" and lay it before Parliament. A subsequent final statement by the Secretary of State, however, will take effect when it is laid before Parliament.
    - The policy statement can be amended as and when the government sees fit, in particular it can be amended by future governments.
    - The policy statement will guide ministers' policy making by requiring ministers to pay "due regard" to the policy statement when making policies.
    - The policy statement does not affect any administrative decisions within any government body (e.g. for planning permissions). In particular, it is of no effect for regulators.
    - The duty of ministers to have due regard to[1] the policy statement does not apply:
        - if there would be
            - no significant environmental benefit or
            - only disproportionate environmental benefit (i.e. very minor environmental benefit but high social and/or economic costs)
        - to policy referring to
            - the armed forces, defence and national security policy
            - taxation, spending or the allocation of resources within government
            - Wales

- The effect of environmental principles as designed within the Environment Act differs from the effect environmental principles have in EU law (and hence UK law prior to Brexit) in the following way:
    - Environmental principles are not established in law and are thus not going to permeate other legislation as they do in EU law
    - There is only a duty on senior government level to pay due regard to the policy statement, thus principles have no direct effect on regulation or administrative decision-making; the only influence would be via policy designs on senior government level.
    - Due to the fact that environmental law is devolved, there is a high likelihood that interpretations of the principles will differ across nations.
    - Environmental principles will not be shaped by courts as they will likely not be a reason disputed in the courts; the only likely matter for courts will be to rule whether the process of having due regard to the policy statement has been followed or not as required by the bill.

3. Environmental Principles currently covered in the Environment Act

- Integration principle (ministers to look for opportunities to integrate environmental protection in other areas of policy making)
- Prevention principle
- Precautionary principle
- Rectification at source principle
- Polluter pays principle

4. Environmental targets in the Environment Act

The Act also includes requirements for targets for at least one matter in the areas of air quality, resource efficiency and waste reduction, water and biodiversity. A target for PM2.5 is also required. However, there exist various ways by which targets can be weakened in comparison to existing targets. De-regulation and regression from existing targets are also possible. Parliamentary scrutiny is limited to either accepting or rejecting targets as it cannot amend proposals.

5. Discussions of Environmental Principles in the Act at Committee Stage[2]

Two of the exemptions to ministers' duty to pay due regard to the policy statement have been discussed during the Act's Committee Stage.

Firstly, policies referring to either the armed forces, defence and national security policy; to completely relieve a department of its environmental duties was viewed as inappropriate, whilst the government justified the exemption by stating policies in relation to national protection should not be hindered by the requirements under the Environment Act due to their sensitive and time-critical nature. Secondly, policies concerning taxation, spending or the allocation of resources within government. Asked for this exemption's justification the government explained it would enable Treasury to base decisions on a wide range of factors (e.g. health, defence, education, environment). Moreover, the exemption would only apply to central spending decisions (e.g. budget allocations), but not to individual policies (e.g. departments budget allocations to specific policies).

6. Selected reading material

- Environment Act 2021: https://bills.parliament.uk/bills/2593
- Explanatory Notes: https://bills.parliament.uk/publications/41685/documents/327
- Draft Policy statement as provided by Defra for consultation in spring: https://consult.defra.gov.uk/environmental-principles/draft-policy-statement/supporting_documents/draftenvironmentalprinciplespolicystatement.pdf
- IEMA Environment Bill series: https://www.iema.net/resources/event-reports/2020/11/16/environment-bill-series-environmental-principles
- Eloise Scotford: Legislation and the Stress of Environmental Problems: https://poseidon01.ssrn.com/delivery.php?ID=599110006119022030098103016098105117063092005021001065087074079018066025125127098005050023002057007036006023099030108089113071037018087036085016126085013085117090021015007118011085120019112003106118116005127082087090099101100121074068004096085095071&EXT=pdf&INDEX=TRUE

- Maria Lee: The Environment Bill: A framework for progressive environmental law? https://www.brexitenvironment.co.uk/2019/10/18/framework-progressive-environmental-law/
- Pavlos Eleftheraiadis: Does the Environment Bill 'enshrine' environmental principles in English law? https://www.ftbchambers.co.uk/blogs/does-environment-bill-'enshrine'-environmental-principles-english-law
- Ruth Chambers: Why the government must rethink its approach on environmental principles https://greenallianceblog.org.uk/2021/03/10/why-the-government-must-rethink-its-approach-on-environmental-principles/
- LandmarkChambers (David Elvin): The Environment Bill (2020) – environmental principles and transparency of environmental protection https://www.landmarkchambers.co.uk/wp-content/uploads/2020/05/The-Environment-Bill-2020-%E2%80%93-environmental-principles-and-transparency-of-environmental-protection.pdf
- Well-being of Future Generation (Wales) Act 2015: https://gov.wales/sites/default/files/publications/2021-06/well-being-of-future-generations-wales-act-2015-the-essentials-2021.pdf
- Environment Bill 2019-21 and 2021-22: Report on committee and remaining stages in the Commons: https://researchbriefings.files.parliament.uk/documents/CBP-9119/CBP-9119.pdf

Annex 5 - Possible Use Cases to Test Proposed Sustainability Principles

In this project we aim to use case studies to illustrate the current situation in a given area and, crucially, to identify the future changes needed. We will use the use cases to consider how progress against sustainability principles might be measured.

Suggested use cases so far, from which we will select a few to work up further for discussion, include those listed below. Nearly all of these raise questions for the roles and responsibilities of key actors, such as how different parties can establish their boundaries of responsibility. Decisions about trade-offs and synergies form the basis of many of these examples.

We propose holding a deliberative workshop on use case 1 in February next year, and then after iterating our approach, holding a workshop on use case 2 in April and use case 3 in the summer.

1) **Cost of living crisis and who pays for welfare in essential services:** Rising gas costs and supply chain issues are having a significant impact on living costs – both directly and indirectly. Many social and environmental costs in essential services are currently recovered through consumer bills. The focus on existing support (for example the Government's Warm Homes Discount for energy) has been on those in receipt of certain benefits such as Pension Credits. As the cost-of-living crisis deepens, the costs of delivering net zero are clarified, and the importance of an inclusive and just transition recognised, who should pay for welfare going forward? How should short and long-term interests be balanced in this context? And given that current arrangements are a patchwork that has been built up over time, do we need a common position or set of principles in sectors like energy, water and communications on who pays for fairness?

2) **Valuing biodiversity:** The deepening biodiversity crisis is raising questions around whether some eco-systems are more valuable than others and how biodiversity is valued alongside other outcomes. For example, outdated infrastructure, increased urban population, pressure on sewer systems (advancing paving/concreted urban areas, inappropriate discharge of waste via the water system etc) and extreme and unpredictable rainfall means the current Combined sewer overflows (CSO) are no longer fit for purpose. In some instances, sewers have been discharged into rivers/coastal areas to relieve pressure, leading to adverse environmental and societal impacts. Complex decisions need to be made by all actors and the principles would potentially be very useful in guiding these decisions, which are "local" within the UK.

3) **Electrical vehicle (EV) charging**: Very concrete decisions need to be made at all levels (companies, regulators, policy makers) to ensure the benefits enabled by mobility are accessible across society in the long-term, ensuring nobody is left behind, and that new technologies provide

the envisaged environmental benefits. There are particular issues around EV charging (particularly public charging) in different geographic locations (eg rural areas) and also concerns from some that public support for EVs in dense urban areas may bake in inefficiencies in land and resource use. Whilst the new Net Zero Strategy may have answered some questions, it will have raised others. Principles have the potential to guide these decisions and help identify what is fair. They have the potential to make a real difference due to the "local" nature of the issue (confined to the UK).

4) **Nimbyism and new energy, water and communications infrastructure:** To ensure the resilience of essential services, new infrastructure may need to be built (e.g. onshore wind turbines, offshore wind cables coming to land, small modular nuclear reactors and new reservoirs). Such works can often come up against immovable local interests and politics but can also be a source of place based co-benefits. Can principles help make decisions around how should local vs. regional and national interests and todays vs. tomorrows interests should be balanced?

5) **Data and innovation:** How do you get a fair balance between societal and individual interests when sharing data sets, including sharing the benefits across sectors? How do you encourage innovation to deliver social and environmental goals with large data sets? What are the ethical and commercial models for this and how can principles help here?

6) **Investment ahead of need in energy and water**: In setting the revenues that energy and water monopoly companies can earn Ofwat and Ofgem may need to make trade-offs between short-term bill impacts and longer-term investment requirements to support resilience, net zero or other environmental goals. Sometimes these decisions need to be made with imperfect information on future needs and may lead to stranded or redundant assets (e.g. of gas networks). They can have geographical impacts and implications for place-based decision-making. These trade-offs are often the central source of tension in price controls between companies and regulators.

7) **Carbon offsetting and the climate crisis**: A carbon offset is an activity that compensates for the emission of carbon dioxide by providing for an emission reduction elsewhere. There are complex ethical and audit/assurance issues when it comes to making decisions about whether carbon offsetting is the appropriate approach for reaching specific net zero goals within an organisation. These have implications for fairness and long-term resilience (e.g. local environmental solutions vs. global offsets, or social vs. environmental outcomes).

8) **Detailed regulatory design**: There are detailed elements of regulatory design (such as the asset lives assumed in price controls or the discount rates used in policy appraisal) that can have a very significant impact on the spread of costs between generations. We could consider how principles could help shape the framing and use of these economic parameters, building on the report prepared for us by Frontier Economics on inter-generational equity.[26]

We may find that some of these use cases may best be tackled in deliberative workshops, some through additional research and some through think-pieces.

In our workshop with the British Academy on 3rd December, we will use use cases 1, 4, 6 and 7 to provide examples of how trade-offs may be approached from cultural, legal and ethical perspectives. The workshop will not seek to 'solve' these use cases but more consider how different disciplines would address them.

[26] https://www.sustainabilityfirst.org.uk/publications-project-research-reports/286-a-framework-for-assessing-intergenerational-fairness

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