Institute for Public Policy Research



INHERITING THE EARTH?

THE UNPRECEDENTED CHALLENGE OF ENVIRONMENTAL BREAKDOWN FOR YOUNGER GENERATIONS

DISCUSSION PAPER 2

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CONTENTS

Summary	3
Introduction	4
1. Environmental breakdown is an overwhelming challenge for younger and future generations	5
Environmental breakdown is an unprecedented leadership challenge	8
2. Younger and future generations are dangerously exposed	9
3. Supporting younger generations to face the future	. 11
Pass a Future Generations Act	. 11
Give the right to vote to 16- and 17-year olds	. 12
Lower the discount rate that guides government decisions	. 13
Conclusion	.13
References	.14

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SUMMARY

Younger generations, in addition to being economically worse off than their parents, face a future of unprecedented environmental breakdown. Damaging human impacts on the environment go beyond climate breakdown to encompass most other natural systems, from soil to biodiversity. This drives a complex process of overall environmental breakdown that has reached critical levels, threatening social and economic stability. Younger and future generations will disproportionately bear the burden of having to rapidly transform economic systems in order to decelerate environmental breakdown while withstanding its increasingly destabilising consequences; an unprecedented challenge. Leaders in older generations are failing to act and so younger and future generations face a toxic inheritance: a future of compounding environmental breakdown and destabilisation.

In response, many young people are already leading the discussion on the threats of environmental breakdown and the need for action. This leadership should be better recognised, including through formal representation of the interests of younger and future generations in decision-making systems. As such, using the UK as a case study, we recommend that the government adopt a Future Generations Act that protects the interests of future generations and their right to a stable environment throughout policymaking. The voice of current younger generations should be formalised by enfranchising 16- and 17-year olds, alongside reducing the discount rate – a financial tool that affects the attractiveness of different projects in which governments and businesses consider investment. These measures should form part of accelerated action by government to respond to environmental breakdown and to help younger and future generations realise a more sustainable, just and prepared world.

ABOUT THIS PAPER

This is the second in a series of short discussion papers that seeks to inform debate over the relationship between policy and politics and environmental breakdown, supporting education in economic, social and political sciences. This paper explores the challenge faced by younger generations and those yet born resulting from environmental breakdown and the measures that can be taken to ameliorate this inter-generational injustice. In doing so, it seeks to help advance environmental improvement, sustainable development, and relieve poverty and disadvantage.

This discussion paper series is part of a major IPPR research programme - *Responding to Environmental Breakdown* - that seeks to understand how to realise a more sustainable, just and prepared society in response to environmental breakdown. The scope of this project is global but uses the UK as a case study to explore the major issues and policy responses. *Responding to Environmental Breakdown* is part of IPPR's wider work on environmental issues, which includes the landmark *Environmental Justice Commission*, which will help develop the ideas and policies to bring about a rapid green transition that is fair and just.

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INTRODUCTION

Mainstream political and policy debates have failed to recognise that human impacts on the environment have reached a critical stage and are starting to erode the conditions upon which socioeconomic stability is possible (Laybourn-Langton et al 2019). These impacts are not isolated to climate breakdown and encompass most other natural systems – including soil, biodiversity and the oceans – driving a complex, dynamic process of overall environmental breakdown that has reached dangerous levels. The consequences include growing economic instability, famine, large-scale involuntary migration, and conflict. Overall, environmental breakdown is creating a new, highly complex and destabilised 'domain of risk' that dominates all areas of policy and politics and increases the chance of the collapse of social and economic systems at local, national and even global levels. The historical disregard of environmental considerations in most areas of policy has been a catastrophic mistake.

Within the UK and globally, the consequences of environmental breakdown fall hardest on communities and countries who are both least responsible for the problem and least prepared for its increasingly severe effects. In addition, environmental breakdown interacts with other inequalities, such as class, ethnicity and gender, making it a fundamental issue of justice (CEJ 2019). Environmental breakdown is a result of the structures and dynamics of social and economic systems, which drive unsustainable human impacts on the environment (Laybourn-Langton and Hill 2019). While providing high living standards for many people, these systems preside over large social and economic inequalities and fail to provide for all. By driving environmental breakdown, these systems are eroding the conditions upon which human needs can be met at all.

Therefore, in response, two overall socioeconomic transformations are needed, to make societies more:

- sustainable and just, bringing human activity to within environmentally sustainable limits while tackling inequalities and improving quality of life
- **prepared**, increasing levels of resilience to the impacts of accelerating environmental breakdown.

This discussion paper explores the unprecedented challenge imposed by environmental breakdown on younger and future generations – both those who do not currently have significant decision-making power in society and those yet to be born.¹ It shows how younger generations will disproportionately bear the burden of having to rapidly transform economic systems in order to decelerate environmental degradation while withstanding its increasingly destabilising consequences; an unprecedented challenge. Younger and future generations are set to receive a toxic inheritance: a future of compounding environmental breakdown and socioeconomic destabilisation. This paper concludes by exploring a number of major policies that should be enacted now to protect the inheritance of younger and future generations and support them in responding to a future dominated by environmental breakdown.

¹ We define 'younger generations' as those, starting with the 'millennial' generation (born between 1981 and 2000), which do not dominate positions of leadership across society. These also include the 'latest generation' (born from 2001 to the present day) and those yet born. These definitions are used by the Intergenerational Commission; see RF 2018.

1. ENVIRONMENTAL BREAKDOWN IS AN OVERWHELMING CHALLENGE FOR YOUNGER AND FUTURE GENERATIONS

There is growing concern that significant inequalities are opening up between generations in the UK. Predominantly, these concerns are understood within an economic context, couched in terms of a prevailing media narrative that "Millennials [those born between 1981 and 2000] are worse off than their parents" (O'Connor 2018). This is because young adults are no longer benefiting from income improvements relative to previous generations, are accumulating far less wealth, and face disproportionately higher housing costs (RF 2018). Furthermore, the growing costs of supporting an ageing population threatens a choice between placing an unsustainable financial burden on younger generations or reducing the services promised to older generations. The seriousness of the situation – and the failure of government to respond – has led a recent House of Lords inquiry to conclude that "if society continues on its current trajectory, and the government takes no action, there could be a breakdown in the intergenerational compact" (House of Lords 2019). Similar concerns are expressed in many countries around the world (RF 2018).

While more attention is being paid to the socioeconomic inequalities opening up between generations, mainstream policy and political debates have given little to no consideration of how the consequences of compounding environmental breakdown will disproportionately impact younger and future generations. Environmental breakdown challenges the tacit intergenerational compact that generations currently in power will promote the flourishing of younger and future generations, or at least not actively threaten socioeconomic stability by undermining the natural preconditions upon which societies depend. The resulting challenge facing younger and future generations is arguably more severe than any of the challenges currently conceived within mainstream debates around intergenerational issues and will act to severely exacerbate all dimensions of inter- and intra-generational inequality, in the UK and around the world. Elements of this challenge include the following.

Younger and future generations will be the most impacted by environmental

breakdown. The impacts of environmental breakdown are expected to rapidly increase into the near future. For example, in the case of climate breakdown, average global temperatures are expected to increase over the coming decades, bringing even more extreme weather, sea level rise and ecosystem breakdown (Carbon Brief 2018, IPCC 2018) – and increasing the chance of catastrophic tipping points. Younger and future generations will have to experience and respond to these impacts, which were partly the result of emissions released by older generations and decisions taken by elites in these generations, most of whom have only a small chance of being alive by 2050.

Environmental breakdown exacerbates intra-generational problems. The consequences of environmental breakdown fall hardest on communities and countries who are both least responsible for the problem and least prepared for its increasingly severe effects (Laybourn-Langton et al 2019, Harrington et al 2018). This is already the case, with, for example, the destructive weather extremes resulting from climate breakdown disproportionately impacting countries with high levels of undernourishment, driving conflict and forced migration (WMO 2019). These countries have made a negligible contribution to cumulative greenhouse gas (GHG) emissions, which have largely been caused by successive generations in the Global North (Laybourn-Langton et al 2019). Into the future, younger generations will disproportionately reside in low and lower middle-income countries and therefore a growing proportion of the global population will experience the worst impacts of

accelerating environmental breakdown, as figure 1 shows, further widening already large intra-generational inequalities.

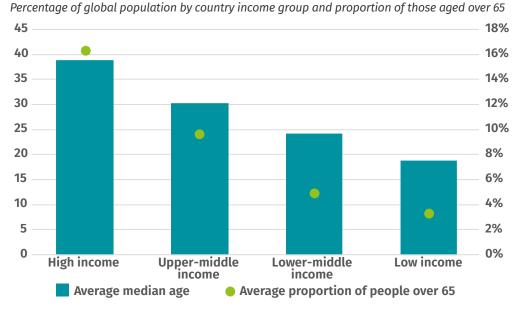
Environmental breakdown imposes severe decision-making constraints on younger and future generations. Younger generations will have to use far smaller quantities of resources over their lifetimes than older generations in order to limit environmental breakdown, as shown in figure 2. For example, it is estimated that the average person born in the UK today will have to emit, on average, eight times fewer GHGs than their grandparents in order to keep temperature rises below 1.5°C (Hausfather 2019). As figure 2 shows, current per capita consumption in the UK already needs to decline by 60-88 per cent to be within per capita boundaries, depending on the indicator. But a person born in the UK in 2050 who lives within per capita boundaries would have to consume even fewer resources, after taking population growth into account (71–91 per cent less than current per capita levels, depending on the indicator). As such, simply 'greening' the existing economic model is not possible: the current model for furthering social outcomes in the UK is unsustainable and, irrespective of environmental breakdown, is failing to provide widely shared prosperity (Laybourn-Langton and Hill 2019). Younger generations will therefore have to rapidly transition to a new model of abundance that ensures human flourishing without destroying the environment, and realises the significant co-benefits of action to slow environmental breakdown. However, the ability to achieve such a transition is being undermined by the continual entrenchment of systems that accelerate environmental breakdown. For example, the UK government invested over £11 billion in oil and gas extraction, petroleum refining and gas generation assets in 2017, compared to £7.5 billion in renewable energy projects, 'locking in' the use of carbon and thereby inhibiting future decarbonisation (BEIS 2019, BNEF 2018). Furthermore, the decision-making of younger and future generations will likely be dominated by the new destabilised domain of risk instituted by environmental breakdown, including food shocks, economic crises, and the forced migration of hundreds of millions of people (Laybourn-Langton et al 2019).

Younger and future generations are less responsible for environmental breakdown.

The cumulative toll of environmental degradation has been incurred by past and present generations. Two important dimensions for inter-generational equity arise. Firstly, generations just or yet to be born have contributed little to nothing to the emission of greenhouse gases, degradation of soils and species extinctions that drive overall environmental breakdown. Secondly, millennials and members of the latest generation (born from 2001 to the present day), while contributing to environmental degradation, have little to no meaningful control over the socioeconomic systems that drive negative impacts on the environment. For example, it is estimated that the majority of GHG emissions have been released since 1988 and that the operations of just 100 companies are linked to 71 per cent of these emissions (Griffin 2017). The decision to do so was taken by a small group of decision-makers born before this time and influenced by socioeconomic systems

FIGURE 1

Younger generations disproportionately reside in those countries most affected by, most vulnerable to, and least responsible for environmental breakdown

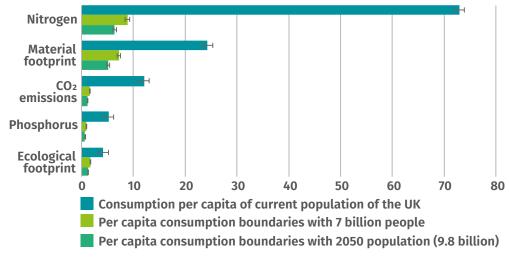


Source: WPR 2018, World Bank 2019a, World Bank 2019b

FIGURE 2

Younger generations cannot live in the same way as their parents

Per capita consumption for the UK, per capita boundaries for a sustainable planet with 7 billion people, and 9.74 billion people in 2050²



Source: O'Neill et al 2018, UNDESA 2017

Original per capita boundaries from Leeds University assume a global population of 7 billion people and all seven indicators account for international trade. Boundaries based on the 'medium scenario' of projected global population of 9.74 billion in 2050 are extrapolations from these figures and assumes that biophysical boundaries remain constant through to 2050. High and low population scenarios are shown in box and whiskers plots. Straightforward per capita allocations omit considerations of justice issues such as wealth distribution. Other methods include differentiated environmental allocations, taking into account nations' differing historical responsibility (contribution to the problem) and capacity (ability to pay) (Baer 2012), or allocations that promote active repairing of environmental damage (Raworth 2017).

ENVIRONMENTAL BREAKDOWN IS AN UNPRECEDENTED LEADERSHIP CHALLENGE

Overall, environmental breakdown could place an unprecedented burden on the shoulders of millennial leaders and those in younger generations, at all levels. These leaders will likely need to:

- continue to slow environmental breakdown by accelerating the transformation
 of socioeconomic systems around the world to ensure human activity is brought
 within sustainable limits in the shortest time possible. This challenge becomes
 harder each day that leaders in older generations do not take sufficient action.
 For example, in the case of climate breakdown alone, GHG emissions must peak
 in 2020 and decline rapidly thereafter in order to avoid a 1.5°C rise. Instead,
 the failure of leaders in older generations to undertake appropriate action
 means warming is on track to exceed a catastrophic 3°C (Laybourn-Langton
 et al 2019, CAT 2018).
- **build a sustainable economic model.** In particular, slowing environmental breakdown will require younger and future generations to develop the means to live within environmental limits while improving quality of life. This necessitates the development of a new model of abundance and living standards that ensures human and environmental flourishing, as well as the realisation of the significant co-benefits of action to slow environmental breakdown.
- manage destabilisation and ensure resilience of human systems at risk of severe destabilisation and collapse from environmental breakdown. Examples include mitigating the negative social and economic impacts of food price rises resulting from extreme weather events in major food producing regions (UNEP 2016).
- recover from collapse of social and economic systems. In the extreme, environmental breakdown could trigger catastrophic breakdown at the global level, driving a rapid process of 'runaway collapse' in which economic, social and political shocks cascade through internationally linked systems – similar to the wake of the global financial crisis of 2007/08 (Laybourn-Langton et al 2019, WEF 2018). Rapid, coordinated responses, as occurred after the crisis, will be needed to minimise ongoing damage and enable recovery.
- realise a countervailing politics capable of successfully countering regressive political projects that seek to exploit the growing fear and destabilisation resulting from environmental breakdown. Mainstream political parties are already espousing responses to environmental breakdown rooted in nationalist and anti-immigrant arguments.³ This trend could grow under conditions of environmental breakdown, threatening domestic and international cooperation and human rights.⁴
- provide emotional stewardship. As well as socioeconomic and health costs, incidences of rapid change or destabilisation and damage can take large emotional tolls on societies.⁵ As such, leaders in Millennial and younger generations will likely have to increasingly steward societies through the psychological and cultural effects of rapid transformations and the growing severity and frequency of environmental shocks. Doing so will likely be made easier by taking measures to maximise the co-benefits of a more sustainable and just society. These include improvements in health, greater energy security, and a reduction in poverty and inequality (Jennings et al 2019).

³ See, for example, Mazoue 2019.

⁴ The political implications of environmental breakdown will be explored in a forthcoming discussion paper in this series.

⁵ For example, the 2007/08 crisis severely affected well-being. See, for example, Mucci et al 2016.

It is unclear whether aspirant leaders in the millennial and other younger generations are prepared for these challenges, to the extent that they can be. Each generation undergoes a formal and informal process of learning through which they prepare to become political and policy leaders (Hall 1993). There are times when a radical break point arguably erodes the value of this learning, rendering some of it redundant. Examples include the financial crisis, where policymakers were unable to pre-empt the crisis partly because they were using models that had not caught up with the complexity of the financial sector. Environmental breakdown is arguably the ultimate example of such a break point as it institutes a new domain of non-linear, highly complex, and systemic risk. Action is needed to ensure that leaders in younger generations can adequately respond to challenges imposed by environmental breakdown.

2. YOUNGER AND FUTURE GENERATIONS ARE DANGEROUSLY EXPOSED

The consequences of environmental breakdown, driven by current socioeconomic models, are imposing a toxic inheritance on younger and future generations. They are burdened with the increasingly difficult challenge of realising sustainable societies in a domain of risk that exposes human systems to damage and destabilisation – risks that grow in their likely severity for each day of inaction in the present. Two overall responses are required to ameliorate this injustice.

- **Empowerment**: Many young people are already leading the discussion on the threats of environmental breakdown and the need for action. This leadership should be better recognised, including through formal representation of the interests of younger and future generations in decision-making systems.
- **Investment**: Investments and other types of support should be accelerated to help younger and future generations realise a more sustainable, just and prepared world. These should maximise the interrelated benefits of both slowing environmental breakdown and preparing for its impacts.

Some progress is being made towards these ends across the world. In particular, growing activism among younger generations is driving recognition of the acute threat to the wellbeing of younger and future generations posed by environmental breakdown, as well as the harm already experienced by communities around the world. These activities include an international movement of school students striking from school in order to protest, inspired by the leadership of Greta Thunberg and other young people, which has spread to over 100 countries (Carrington 2019). The strikers have won the acclaim of thousands of scientists, health professionals and political leaders (Warren 2019, Taylor 2019, Guterres 2019). In turn, their impact is evidenced by the public statements of leaders in the fossil fuel industry, with the secretary general of the Organization of the Petroleum Exporting Countries (OPEC) concluding that the strikers, among other campaigners, are "perhaps the greatest threat to our industry going forward" (AFP 2019).

These actions are complemented by the definition of sustainable development as that which "meets the needs of the present generation without compromising the ability of future generations to meet their own needs" (Brundtland 1987). Moreover, the need to safeguard the wellbeing of future generations is recognised by many international forums including the 1992 Rio Declaration on Environment and Development, the 2015 Paris Agreement on Climate Change and over 200 UN General Assembly resolutions (MRFCJ 2018). At the nation state level, intergenerational rights to a healthy environment are enshrined in the constitutions of around three-quarters of countries worldwide (Treves et al 2018). In the UK, the pathbreaking Well-being

of Future Generations (Wales) Act 2015 imposes duties on all public bodies in Wales and established a Future Generations Commissioner for Wales, who acts as a guardian for the interests of future generations (Anderson 2018, Welsh government 2015). Meanwhile, young people are involved in policy and politics through various mechanisms, not least a network of over 620 local youth councils (BYC 2016).

Yet, overall, efforts to support younger and future generations are dangerously inadequate. Awareness, engagement and action on the intergenerational implications of environmental breakdown have been negligible. Policymakers often exhibit behaviour that casts doubt on their cognisance of the environmental implications of current policy decisions for the life chances of younger and future generations. For example, in June 2019 the then UK chancellor chose to warn of the financial costs of investments needed to meet a net-zero decarbonisation target in the UK (Pickard 2019) without recognising the necessity to make these investments and the potential present and future health, social and economic benefits of doing so. The final report of a recent House of Lords inquiry into intergenerational fairness made no meaningful reference to climate and other environmental breakdown (House of Lords 2019). In September 2019, Sajid Javid, the newly installed chancellor, failed to include tackling climate and wider environmental breakdown in his list of what he called 'people's priorities' and allocated negligible sums of funding towards supporting decarbonisation of the economy (HMT 2019).

Many young people are excluded from decision-making processes by not having the right to vote until they reach the age of 18 and existing efforts to increase youth participation in government consultations, such as those in Scotland, are insufficiently resourced (Children in Scotland 2018). Indeed, across the UK, although there are many laws protecting children's rights, with the exception of Wales' Future Generations Commissions, there are no formal mechanisms to ensure that current policymakers must consider the likely future impacts of policies on generations yet to be born, and sustainable development has not been embedded legally or institutionally across government (Roderick 2010).

At the international level, the recognition of future generations in sustainable development has not carried into the UN Sustainable Development Goals (SDGs), in which there is no explicit reference to the principles of 'intergenerational equity' and 'intergenerational rights'. Rather, references to equity and rights in the SDGs apply almost exclusively intragenerationally, that is, to those already alive (Spijkers 2018). These inadequacies exist alongside a general global failure to act on preventing environmental breakdown and recognise its already severe impacts on communities across the world (Laybourn-Langton et al 2019). In 2017, decisions were taken to invest around US\$1 trillion in fossil fuels worldwide (IEA 2018), locking younger and future generations into more dangerous levels of climate breakdown. In the same year, over 60 per cent of the world's 100 largest public pension funds, whose \$11.3 trillion in assets currently mostly benefit older generations, published little or no information on their responses to climate breakdown (AOD Project 2018).

Furthermore, there is a lack of understanding of and governance frameworks for potentially damaging technologies that could be deployed by those seeking emergency responses to increasingly severe environmental breakdown, such as solar radiation management (or 'geoengineering'), which are untested and could have large risks from deployment (C2G2 2018). A resolution to prepare an assessment of the status of such technologies, seen as a first step to stronger oversight, failed to pass at the UN Environment Assembly earlier this year (Watts 2019).

3. SUPPORTING YOUNGER GENERATIONS TO FACE THE FUTURE

The toxic inheritance imposed by environmental breakdown is, in large part, ignored by mainstream policy and political debates. While younger generations are building on the efforts of campaigners in older generations in raising awareness of the problem, leaders around the world are failing to choose to halt environmental breakdown and ensure younger and future generations are better prepared for an increasingly destabilised future. This acute failure is in addition to the ongoing intragenerational failure to combat the injustice of environmental breakdown falling on those communities across the world that are least responsible and prepared. These injustices are strongly related; for example, the legacy of extractive imperialism has inhibited the development of former colonies which. in turn, could heighten their vulnerability to current and future environmental breakdown. Therefore, the primary purpose of action on environmental breakdown should be to realise a socioeconomic transformation that brings human activity to within environmentally sustainable limits while narrowing inequality and promoting justice, improving quality of life, and enhancing preparedness for the consequences of environmental breakdown (Laybourn-Langton and Hill 2019). Key means of doing so are explored in the other discussion papers in this series.

As the challenges explored above show, action to respond to environmental breakdown should recognise how the challenge is likely to become more severe in the near future, placing a particular burden on younger and future generations. Indeed, there is a growing realisation among younger generations of the severity of the challenge posed by environmental breakdown, with one poll of under-35s in the UK reporting that 69 per cent believe that "we are facing a climate emergency" – a position backed by a majority, albeit smaller, of the wider population (Barasi 2019). Against this favourable political backdrop, there is much that the government should do to empower and support younger and future generations to respond to and prepare for environmental breakdown. Measures are needed to both empower younger and future generations, through greater representation of their interests in decision-making, and to invest in their ability to respond to environmental breakdown. These measures will differ between younger generations and those yet born, and should include the following.

PASS A FUTURE GENERATIONS ACT

We recommend that the UK government builds on the example of the Future Generations Commissioner in Wales and adopts a UK-wide Future Generations Act in order to formally recognise protections for the interests of future generations and their right to a stable environment. Doing so would recognise those yet to be born as stakeholders in policy and would ensure they had legal standing should the government fail to meet its environmental responsibilities (Roderick 2010). A Future Generations Act would help to change the overall culture of policymaking, introducing a requirement to focus on long-term policymaking. Such an act would also provide clarity to businesses of the government's long-term policy trajectory. To ensure the interests of future generations are integrated at all levels of government, the Future Generations Act could have the following components:

• embedding the rights of future generations in legislation, in the same way as civil and political rights are embedded in the Human Rights Act. Doing so would provide future generations with constitutional protection and legal standing in the event that government actions fail to meet environmental targets

- containing mechanisms to support the implementation of this right could include:
 - the creation of an Office for Future Generations that would sit within government and be responsible for conducting 'future generations impact assessments' as part of every policy cycle. The office could sit within the Treasury or Number 10 and would receive input from the Future Generations Commission, described below. As part of these impact assessments, ministers would have a statutory obligation to demonstrate how their decisions considered the rights of future generations
 - the creation of a UK-wide Future Generations Commission, which would advise the government on the issues facing future generations, the impact of policies on these generations, and give policy advice on meeting the government's responsibilities. The commission would provide the input and knowledge base on which the Office for Future Generations could conduct its impact assessments and would comprise future generations officers within each region and nation in the UK, who would provide input from local areas. As such, the Future Generations Commissioner in Wales would continue with its current duties as well as feed into the UK-wide commission
 - the creation of a Future Generations Select Committee to give parliament the power to scrutinise government policy and its impacts on future generations, drawing on the expert input of the Future Generations Commission.

The act would need to exist alongside a Sustainable Economy Act, as recommended in the first discussion paper of this series (Laybourn-Langton and Hill 2019). The Sustainable Economy Act would mandate statutory targets for the rapid reduction of a full range of environmental impacts, including across biodiversity, soil fertility and air quality, effectively placing a full sustainability constraint on all UK economic activity. These environmental targets would provide the basis upon which the components of the Future Generations Act would ensure government provides rights to a healthy environment for future generations. Furthermore, the bodies created through the Future Generations Act should work with government enforcement and advisory bodies regarding environmental protection and improvement.

GIVE THE RIGHT TO VOTE TO 16- AND 17-YEAR OLDS

At the national level, citizens under 18 years of age are not enfranchised for issues that may have a considerable impact on their lives, and for a longer period of time. relative to older generations. In recent years there have been many campaigns to bring the voting age in line with the age of paying income tax and giving full consent to medical treatment, among other rights and responsibilities (BYC 2019, AOC 2018). In Scotland, 16 is already the voting age in local and devolved elections. and 16- and 17-year olds were eligible to vote in the 2014 Scottish independence referendum (Johnston and Dempsey 2019). Members of the Conservative party aged 15 and over were also able to vote for the current prime minister in the recent leadership contest (Merrick 2019). Arguments to enfranchise younger people include combatting voter apathy and the democratic need to gain the consent of the governed, as well as successful instances in other constituencies and contexts (Gershon 2018, Hart and Atkins 2011). The unprecedented implications and challenges of environmental breakdown for younger generations mean exclusion of capable younger people is no longer acceptable. We recommend that 16- and 17-year olds should be given the right to vote. To support this, government should provide greater educational materials to inform democratic decisions in general, and environmental breakdown in particular, linking to wider democratic reform.⁶

⁶ These issues will be exploring in a forthcoming paper on the political consequences of environmental breakdown.

LOWER THE DISCOUNT RATE THAT GUIDES GOVERNMENT DECISIONS

In the context of socially valuable projects, the discount rate is a highly subjective tool used in government cost-benefit analyses to estimate the amount by which the benefits of a public investment may decline over time. When a higher discount rate is applied to a range of projects this means that those with a more immediate payback are more likely to be preferred. But it also implicitly shows an ethical preference for current generations over future ones since a higher discount rate reduces the weight of future costs as well as benefits. Currently the UK government's standard discount rate within its Green Book⁷ is 3.5 per cent for the first 30 years of a project (HM Treasury 2013). This is far higher than the average discount rate of 1.4 per cent from the landmark Stern Review into the effects of climate breakdown on the economy (Stern 2007). This is problematic for projects which would have positive long-term impacts on the environment because they generate costs and benefits that are not captured within economic valuations (ibid) (such as the value of improved air quality (Carriazo 2016)). If these benefits were valued properly then the discount rate would likely be lower. Currently, however, high discount rates applied to environmental projects make them appear less valuable than they actually are, and they are therefore more vulnerable to being ignored (Angelsen 1991). Furthermore, there is evidence that markets are increasingly favouring more short-term outcomes (Sampson and Shi 2018), with short-termism having always been a factor driving the environmental breakdown facing future generations. In order to reduce these inequalities, we recommend that the government lower the discount rate to at least as low as 1.4 per cent.

CONCLUSION

Concern has been growing that Millennials and younger generations can no longer expect to be 'better off' than their parents, whether that be buying a house, maintaining steady and fulfilling employment, or enjoying rising income and wealth. The situation is far more serious. As a result of environmental breakdown, these generations can expect to live in a world in which the natural preconditions upon which societies depend have been critically impaired. This threat to socioeconomic stability has largely been ignored within mainstream policy and political debates, constituting a colossal dereliction of duty on the part of the current generation of leaders. Immediate efforts are needed to support younger as well as future generations respond to environmental breakdown, protect their rights to a stable environment, and maximise the interrelated benefits of preventing, mitigating and preparing for its impacts. Young people are becoming leaders in their own right, bravely facing up to the realities of environmental breakdown and urging a faster response. Current leaders must take heed and act now so these generations aren't bequeathed a toxic inheritance.

REFERENCES

- Agence France-Presse [AFP] (2019) 'Climate campaigners 'greatest threat' to oil sector: OPEC', *France* 24.https://www.france24.com/en/20190702-climate-campaigners-greatestthreat-oil-sector-opec
- Anderson V (2018) Protecting the interests of future generations, Centre for the Understanding of Sustainable Prosperity. <u>https://www.cusp.ac.uk/wp-content/</u> uploads/Protecting-the-interests-of-future-generations.pdf
- Angelsen A (1991) Cost-Benefit Analysis, Discounting, and the Environmental Critique: Overloading of the Discount Rate?, Chr Michelson Institute. <u>https://core.ac.uk/</u> <u>download/pdf/59168532.pdf</u>
- Asset Owners Disclosure Project [AOD Project] (2018) Pensions in a changing climate. https://aodproject.net/wp-content/uploads/2019/01/AODP-PensionsChanging Climate.pdf
- Association of Colleges [AOC] (2018) 'Fair.Vote campaign launches', press release. https://www.aoc.co.uk/news/fairvote-campaign-launches
- Barasi L (2019) 'Guest post: Polls reveal surge in concern in UK about climate change', *Carbon* Brief, blog. <u>https://www.carbonbrief.org/guest-post-rolls-reveal-surge-in-</u> <u>concern-in-uk-about-climate-change</u>
- Baer P (2012) 'The greenhouse development rights framework for global burden sharing: reflection on principles and prospects', WIREs Climate Change. <u>https://doi.org/10.1002/</u> wcc.201
- Bloomberg New Energy Finance [BNEF] (2018), Clean Energy Investment Trends, 2018. https://data.bloomberglp.com/professional/sites/24/BNEF-Clean-Energy-Investment-Trends-2018.pdf
- British Youth Council [BYC] (2016) 'Local youth council network', webpage. https://www.byc.org.uk/uk/local-youth-council-network
- British Youth Council [BYC] (2019) 'Votes at 16', webpage. <u>https://www.byc.org.uk/</u> campaigns/votesat16
- Brundtland G (1987) Report of the World Commission on Environment and Development: Our common future. <u>https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf</u>
- C2G2 (2018) Governing Solar Radiation Modification (SRM). <u>https://www.c2g2.net/</u>wp-content/uploads/C2G2_Solar-Brief-hyperlink.pdf
- Carbon Brief (2018) The impacts of climate change at 1.5C, 2C and beyond. https://interactive.carbonbrief.org/impacts-climate-change-one-pointfive-degrees-two-degrees/?utm_source=web&utm_campaign=Redirect
- Carriazo F (2016) 'Economics and Air Pollution' in Sallis PJ (ed) (2016) Air Quality: Measurement and Modeling, IntechOpen. <u>https://www.intechopen.com/books/air-quality-measurement-and-modeling/economics-and-air-pollution</u>
- Carrington D (2019) 'School climate strikes: 1.4 million people took part, say campaigners', *Guardian*. <u>https://www.theguardian.com/environment/2019/mar/19/school-climate-</u> strikes-more-than-1-million-took-part-say-campaigners-greta-thunberg
- Children in Scotland (2018) The impact of children and young people's participation on policy making. <u>https://www.gov.scot/publications/impact-children-young-peoples-participation-policy-making/</u>
- Climate Action Tracker [CAT] (2018) 'Temperatures: Addressing global warming', webpage. https://climateactiontracker.org/global/temperatures/
- Committee on Climate Change [CCC] (2019) *Summary report: 2019 progress report to Parliament*. <u>https://www.theccc.org.uk/wp-content/uploads/2019/07/2019-Progress-</u> <u>Report-Summary.pdf</u>
- Department for Business, Energy & Industrial Strategy [BEIS] (2019) UK Energy in Brief 2018. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/ attachment_data/file/728374/UK_Energy_in_Brief_2018.pdf

- Department for Environment, Food & Rural Affairs [DEFRA] (2019) Draft Environment (Principles and Governance) Bill 2018 policy paper. <u>https://www.gov.uk/government/</u> publications/draft-environment-principles-and-governance-bill-2018/environment-billpolicy-paper
- Gershon L (2018) 'The case for lowering the voting age', JSTOR Daily. <u>https://daily.jstor.org/</u> case-lowering-voting-age/
- Griffin P (2017) The carbon majors database: CDP carbon majors report 2017, CDP (formerly the Carbon Disclosure Project). <u>https://b8f65cb373b1b7b15feb-</u> c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/reports/ documents/000/002/327/original/Carbon-Majors-Report-2017.pdf [accessed 2 August 2019]
- Guterres A (2019) 'The climate strikers should inspire us all to act at the next UN summit', Guardian. <u>https://www.theguardian.com/commentisfree/2019/mar/15/climate-strikers-urgency-un-summit-world-leaders</u>
- Hall PA (1993) 'Policy paradigms, social learning, and the state: the case of economic policymaking in Britain', *Comparative politics*, pp275-296. <u>https://www.jstor.org/stable/422246</u>
- Harrington LJ, Frame D, King AD and Otto FE (2018) 'How uneven are changes to impact-relevant climate hazards in a 1.5° C world and beyond?', *Geophysical Research Letters*, 45(13), pp6672-6680. <u>https://agupubs.onlinelibrary.wiley.com/</u> <u>doi/abs/10.1029/2018GL078888</u>
- Hart D and Atkins R (2011) American sixteen- and seventeen-year-olds are ready to vote, The Annals of the American Academy of Political and Social Science. <u>https://www.jstor.org/</u> stable/27895968?mag=case-lowering-voting-age&seq=1#page_scan_tab_contents
- Hausfather Z (2019) 'Analysis: Why children must emit eight times less CO2 than their grandparents', *Carbon Brief*, blog. <u>https://www.carbonbrief.org/analysis-why-children-must-emit-eight-times-less-co2-than-their-grandparents</u>
- Herrington R et al (2019) 'Leading scientists set out resource challenge of meeting net zero emissions in the UK by 2050', Natural History Museum, press release. <u>https://www.nhm.ac.uk/press-office/press-releases/leading-scientists-set-out-resource-challenge-of-meeting-net-zer.html</u>
- HM Treasury (2013) Green Book supplementary guidance: discounting. <u>https://www.gov.uk/</u>government/publications/green-book-supplementary-guidance-discounting
- HM Treasury [HMT] (2019) Spending Round 2019: Chancellor Sajid Javid's speech https://www.gov.uk/government/speeches/spending-round-2019-sajid-javids-speech
- <u>House of Commons (2019),</u> Environment, Food and Rural Affairs Committee: Pre-legislative scrutiny of the Draft Environment (Principles and Governance) Bill. https://publications.parliament.uk/pa/cm201719/cmselect/cmenvfru/1893/1893.pdf
- House of Lords (2019) *Tackling intergenerational unfairness*, Select Committee on Intergenerational Fairness and Provision, Report of Session 2017–19. https://publications.parliament.uk/pa/ld201719/ldselect/ldintfair/329/329.pdf
- Mazoue A (2019) 'Le Pen's National Rally goes green in bid for European election votes', *France 24.* https://www.france24.com/en/20190420-le-pen-national-rally-front-<u>environment-european-elections-france</u>
- Merrick R (2019) 'Conservative Party allowing 15-year-olds to vote for PM despite opposing 16-year-olds voting in general election', *Independent*. <u>https://www.independent.co.uk/</u> news/uk/politics/conservative-leadership-under16s-voting-boris-johnsonhypocrisy-a9007851.html
- IPPR Centre for Economic Justice [CEJ] (2019) *The UK in the global economy*, IPPR. http://www.ippr.org/research/publications/uk-in-the-global-economy
- Intergovernmental Panel on Climate Change [IPCC] (2018) 'Summary for Policymakers', in Masson-Delmotte V et al (eds) (2018) Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. https://www.ipcc.ch/sr15/chapter/spm/
- International Energy Agency [IEA] (2018) *World Energy Investment 2018*, OECD/IEA. https://webstore.iea.org/world-energy-investment-2018

- Jennings N, Fecht D and De Matteis S (2019) Co-benefits of climate change mitigation in the UK: What issues are the UK public concerned about and how can action on climate change help to address them?, Grantham Institute, briefing paper no 31. https://www.imperial.ac.uk/media/imperial-college/grantham-institute/public/ publications/briefing-papers/Co-benefits-of-climate-change-mitigation-in-the-UK.pdf
- Johnston N and Dempsey N (2019) Voting age, House of Commons briefing paper. https://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN01747#fullreport
- Laybourn-Langton L, Rankin L and Baxter D (2019) *This is a crisis: Facing up to the age of environmental breakdown*, IPPR. <u>https://www.ippr.org/research/publications/age-of-</u> <u>environmental-breakdown</u>
- Laybourn-Langton L and Hill T (2019) Facing the crisis: Rethinking economics for the age of environmental breakdown, IPPR. <u>http://www.ippr.org/research/publications/facing-the-crisis-rethinking-economics-for-the-age-of-environmental-breakdown</u>
- Mary Robinson Foundation Climate Justice [MRFCJ] (2018) *Global Guardians: A voice for future generations.* https://www.mrfcj.org/wp-content/uploads/2018/02/Global-Guardians-A-Voice-for-Future-Generations-Position-Paper-2018.pdf
- Mucci N, Giorgi G, Roncaioli M, Perez JF and Arcangeli G (2016) 'The correlation between stress and economic crisis: a systematic review', *Neuropsychiatric disease and treatment*, 12, p983. <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4844458/</u>
- O'Connor S (2018) 'Millennials poorer than previous generations, data show', *Financial Times*. https://www.ft.com/content/81343d9e-187b-11e8-9e9c-25c814761640
- Pickard J (2019) 'UK net zero emissions target will 'cost more than £1tn", *Financial Times*. https://www.ft.com/content/036a5596-87a7-11e9-a028-86cea8523dc2
- Raworth K (2017) Doughnut economics: Seven ways to think like a 21st-century economist, Random House
- Resolution Foundation [RF] (2018) A new generational contract: The final report of the Intergenerational Commission. <u>https://www.resolutionfoundation.org/advanced/a-new-generational-contract/</u>
- Ripple WJ, Wolf C, Newsome TM, Galetti M, Alamgir M, Crist E, Mahmoud MI, Laurance WF and 15,364 scientist signatories from 184 countries (2017) 'World Scientists' Warning to Humanity: A Second Notice', *BioScience*, Volume 67, Issue 12, 1 December 2017, pp1026– 1028. <u>https://doi.org/10.1093/biosci/bix125</u>
- Roderick (2010) Taking the longer view: UK governance options for a finite planet, WWF and the Foundation for Democracy and Sustainable Development. <u>http://www.fdsd.org/</u>site/wp-content/uploads/2014/11/Taking-the-longer-view-December-2010.pdf
- Sampson R and Shi Y (2018) Are US firms and markets becoming more short-term oriented? Evidence of shifting firm and investor time horizons, 1980-2013. https://corporate-sustainability.org/wp-content/uploads/Are-US-Firms-and-Markets-Becoming-more-short-term-oriented.pdf
- Spijkers O (2018) 'Intergenerational equity and the sustainable development goals', Sustainability. <u>https://www.mdpi.com/2071-1050/10/11/3836/htm</u>
- Stern N (2007) The Economics of Climate Change: The Stern Review. http://www.cambridge.org/us/catalogue/catalogue.asp?isbn=0521700809
- Taylor M (2019) 'Doctors call for nonviolent direct action over climate crisis', *Guardian*. <u>https://www.theguardian.com/environment/2019/jun/27/doctors-call-for-nonviolent-direct-action-over-climate-crisis</u>
- Treves A, Artelle K, Darimont C, Lynn W, Paquet P, Santiago-Ávila F, Shaw R, Wood M (2018) 'Intergenerational equity can help to prevent climate change and extinction', *Nature Ecology & Evolution*. https://www.nature.com/articles/s41559-018-0465-y
- United Nations Department of Economics and Social Affairs [UNDESA] (2017) 'World population projected to reach 9.8 billion in 2050, and 11.2 billion in 2100', news article. https://www.un.org/development/desa/en/news/population/world-populationprospects-2017.html
- United Nations Environment Programme [UNEP] (2016) ERISC Phase II: How food prices link environmental constraints to sovereign credit risk. <u>https://www.unepfi.org/</u> publications/ecosystems-publications/erisc-publications/erisc-phase-ii-how-foodprices-link-environmental-constraints-to-sovereign-credit-risk-2/

- University of Leeds (2019) A Good Life For All Within Planetary Boundaries. https://goodlife.leeds.ac.uk/countries/
- Watts J (2019) 'US and Saudi Arabia blocking regulation of geoengineering, sources say', *Guardian*. <u>https://www.theguardian.com/environment/2019/mar/18/us-and-saudi-arabia-blocking-regulation-of-geoengineering-sources-say</u>
- Warren M (2019) 'Thousands of scientists are backing the kids striking for climate change', *Nature*. <u>https://www.nature.com/articles/d41586-019-00861-z</u>
- Welsh government (2015) *Well-being of Future Generations (Wales) Act 2015*. https://futuregenerations.wales/wp-content/uploads/2017/01/WFGAct-English.pdf
- World Bank (2019a) World Development Indicators. <u>https://databank.worldbank.org/reports.</u> <u>aspx?source=2&series=SP.POP.65UP.TO.ZS&country=</u>
- World Bank (2019b) World Bank Country and Lending Groups. https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bankcountry-and-lending-groups
- World Economic Forum [WEF] (2018) The Global Risks Report 2018 13th Edition. http://www3.weforum.org/docs/WEF_GRR18_Report.pdf
- World Meteorological Organisation [WMO] (2019) WMO Statement of the State of the Global Climate in 2018. https://gallery.mailchimp.com/daf3c1527c528609c379f3c08/ files/82234023-0318-408a-9905-5f84bbb04eee/Climate_Statement_2018.pdf
- World Population Review [WPR] (2018) *Countries by Media Age 2018*. http://worldpopulationreview.com/countries/median-age/

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