Written evidence, Dr Viktoria Spaiser and Professor Cristina Leston Bandeira (University of Leeds) (CCE0016)

We are submitting this evidence as academics, whose research focuses on accelerating social change in response to the climate crisis, and on parliament and public engagement. Spaiser is Associate Professor in Sustainability Research and Computational Social Science and is currently a holder of the UKRI Future Leaders Fellowship on "Understanding Normative Change to Address the Climate Change Emergency". Leston-Bandeira is Professor of Politics and Co-Director of the Centre for Democratic Engagement, as well as Chair of the Study of Parliament Group. Our submission addresses questions within the sections *Behaviour change* and *The role of Government and other actors* (F, I, N and P).

Summary:
- Behavioural change is best explained through two key frameworks: the Theory of Planned Behaviour (TPB) and the Social Identity Model of Pro-Environmental Action (SIMPEA).
- Norms, which act across frameworks and intervention methods, play a crucial role in behavioural change. Norms refer to expectations shared within a social context (social group, nation, international community) that a certain behaviour will have either rewarding or punitive consequences.
- To affect behavioural change in communities (rather than just individuals), one has to instil normative change within a range of social groups.
- There are four types of social norms: social, moral, quasi moral and legal.
- Normative change can start by challenging existing norms (e.g. overconsumption) and this can be best achieved by appealing to other social or moral norms that are widely shared, such as human rights or duty of care for children.
- Norm champions, social innovators or early adopters are key to affect normative change.
- The question of fairness in climate change concerns not only local justice, but global and intergenerational justice. Action should target first and foremost those most affluent.
- Government has a key role in encouraging normative change, but this needs to be pursued across a wide range of actors. For example, businesses can integrate climate friendly incentives within their practices, and civil society plays a key role in addressing knowledge gaps, as well as in disseminating key climate friendly norms.
- Public engagement programmes are key to help educate the wider public about the climate emergency, by supporting the normative shift needed for

behavioural change, but also specifically to address the knowledge gap on climate change.

F. What are the pros/cons and limitations of different frameworks and methods for promoting behaviour change?

1. Before we outline frameworks and methods for behaviour change, it is important to establish the extent of the change needed. The annual average lifestyle carbon footprint per person in the UK has been estimated to be 8.5 tCO_2e (in comparison, Canada 14.2 tCO_2e, Indonesia 2.2 tCO_2e). To reach the aspirational 1.5°C target we need to aim for a lifestyle carbon footprint target of 0.7 tCO_2e by 2050, with intermediary targets of 2.5 tCO_2e by 2030 (see Figure 1). The gaps between actual lifestyle and the targets show that **carbon footprints in high-income countries such as the UK need to be reduced by 91–95% by 2050**.[1] This target can only be achieved through behavioural change along technological innovation and dedicated climate policies.
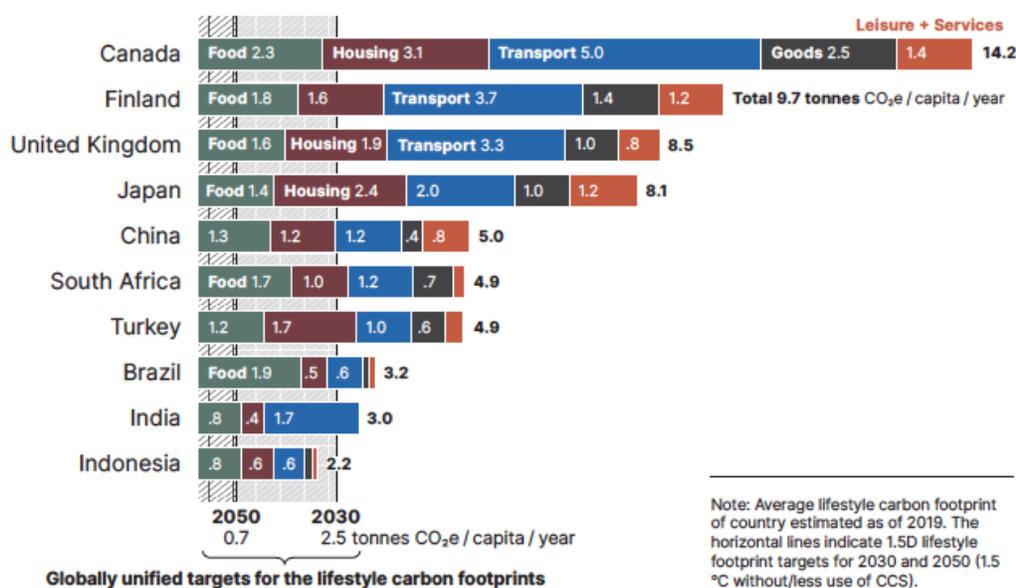

Figure 1: Carbon footprint and its breakdown between consumption domains and globally unified targets for the lifestyle carbon footprints (Source: Akenji et al. 2021)

2. The reduction needs to happen in six domains: food, housing, transport, goods, leisure and services, as it is in these domains where most benefits in terms of reaching net zero can be yielded, with food, housing and personal transport having the largest impact (approximately 79%). Behaviour change interventions should focus therefore on these domains.

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[1] Akenji, L., Bengtsson, M., Toivio, V., Lettenmeier, M., Fawcett, T., Parag, Y., Saheb, Y., Coote, A., Spangenberg, J.H., Capstick, S., Gore, T., Coscieme, L., Wackernagel, M., Kenner, D. (2021): 1.5-Degree Lifestyles: Towards A Fair Consumption. Hot or Cool Institute, Berlin. URL: https://hotorcool.org/wp-content/uploads/2021/10/Hot_or_Cool_1_5_lifestyles_FULL_REPORT_AND_ANNEX_B.pdf

3. One prominent framework for behaviour change is the **Theory of Planned Behaviour** (TPB), illustrated in Figure 2.[2] One of the key elements of this theory is ***behavioural intention*** which is influenced by attitudes, norms and perceived action control, as well as the actual behavioural control. **The actual behavioural control emphasises that we can only adopt (new) behaviours that are actually possible/available in a given context**. Behavioural change is hence only possible in an enabling environment, where the desired behaviour is an available and non-punitive option. This actual behavioural control is however insufficient in itself, people also need to be aware that they can change their behaviour (perceived behavioural control). This explains why it is often difficult to change established behaviours.

4. For instance, in 2020 25% of car trips were under 1 mile,[3] i.e. within a walking distance, making walking an available and non-punitive option (in fact, more cost effective); nevertheless, this was an option not taken by many people. Using the car is for many people a habit and it does not occur to them that there are other options, in particular if they don't observe their peers taking other options.
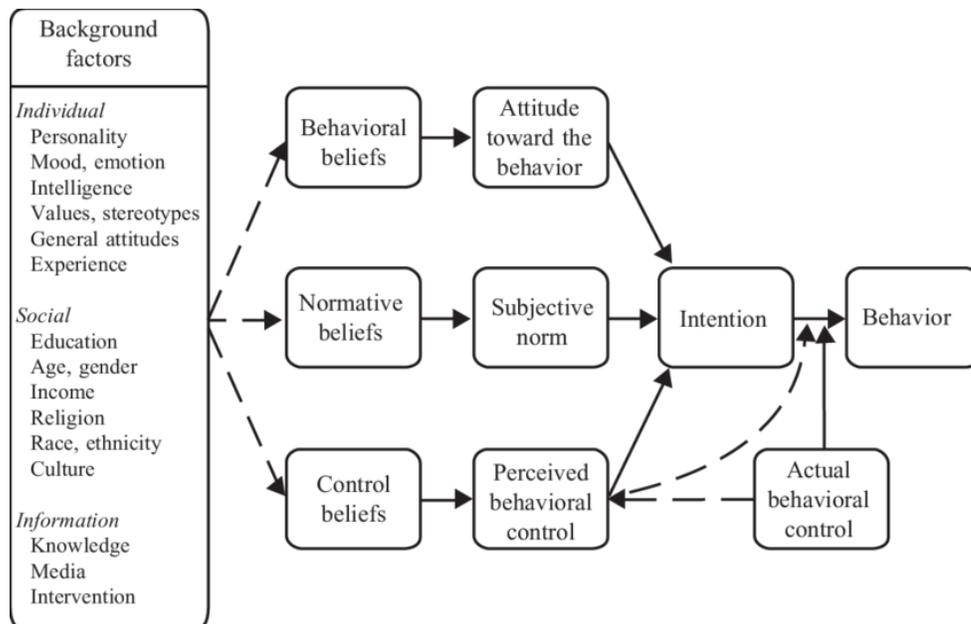

Figure 2: Theory of Planned Behaviour (Source: Ajzen & Fishbein 2005)

5. A key element of this theory is the ***social context***, and here norms play a crucial role, both observable social norms (i.e. what do peers do, do they drive their car or walk) and implicit moral norms (i.e. what is regarded as

[2] Ajzen, I. and Fishbein, M. (2005): The Influence of Attitudes on Behavior. In: D. Albarracín, D., Johnson, B.T. and Zanna, M.P. (eds): The handbook of attitudes. New York: Psychology Press, 173-221.
[3] Department for Transport (2020): National Travel Survey: 2020. URL: https://www.gov.uk/government/statistics/national-travel-survey-2020/national-travel-survey-2020

socially acceptable / morally right). Which norms become behaviourally relevant, i.e. subjective norms, depends on people's self-perception. Do they think of themselves as someone who cares about climate change?

6. The attitudes about the behaviour also play a role, i.e. do they think that shifting from using the car to walking will actually make a difference. In this context **a discourse that suggests that individual action does not matter, that it's all down to big companies and governments to tackle climate change, is not helpful**. While it's true that individual action alone will not solve climate change, it is also true that companies and governments cannot act effectively without support and active contribution from citizens and consumers, which will include behavioural change.

7. In essence, **this framework shows that motivation (attitudes, norms, perceptions), while important, is not sufficient if there is no actual behavioural control, i.e. the desired behaviour is realistically not feasible in a given context**. While this theoretical framework is comprehensive, its sole focus on individual behaviour can be criticised. In particular, while the framework acknowledges the social context, it does not explicitly consider the importance of social identities for instance.

8. A theoretical framework that goes beyond behavioural change at the individual level is the **Social Identity Model of Pro-Environmental Action** (SIMPEA - shown in Figure 3), which emphasises collective behavioural change.[4] This framework shows **the importance of norms and of the goals in groups that individuals identify with**. Acting as a member of a group enables people to experience greater efficacy; at the individual level, people are likely to feel overwhelmed and helpless, but as part of a collective, they are more likely to feel empowered.

9. According to the SIMPEA framework, the extent of identification with a group, whether the group harbours climate-friendly norms and goals, and the perceived ability of the group to act, determine whether people within that group undertake climate action, both politically (e.g. campaigning) and in terms of behavioural change. However, the extent to which the group's climate norms and goals develop and become salient also depends on its members' appraisal of the climate crisis, as this appraisal results in emotions and motivations, both individual and collective that then drive these norms and goals.

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[4] Fritsche, I., Barth, M., Jugert, P., Masson, T. and Reese, G. (2018): A social identity model of pro-environmental action (SIMPEA). Psychological Review, 125, 245-269.
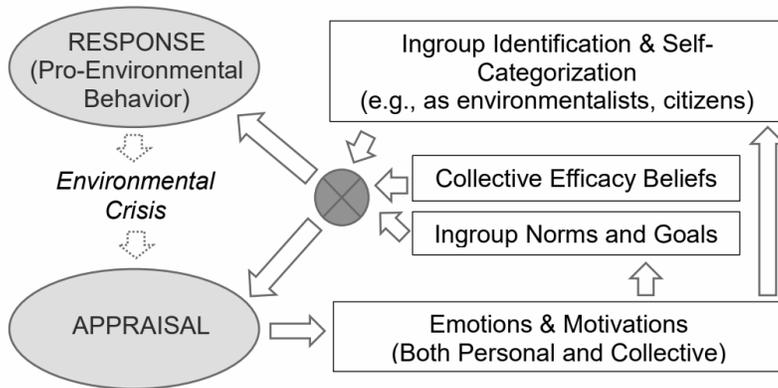
Figure 3: SIMPEA Model (Source: Fritsche et al. 2018)

10. **To affect behavioural change in communities (rather than just individuals), one has to instil normative change within a range of social groups**. This works best through group leaders and other prominent group members; they can act as norm champions and behavioural models with new aspirational goals and visions for the group.

11. The advantage of this framework is its emphasis on the collective rather than the individual. The disadvantage of this framework is that the type of interventions affecting change in social groups are less well defined and developed; although, **one possible intervention is certainly at the level of appraisal, i.e. promoting awareness and salience** of key facts from the climate emergency. Public engagement initiatives can therefore play an important role, in both informing but also making people realise the relevance of the climate crisis to their own lives. Another important point of intervention is to **promote new climate change related norms.**

12. Whilst the climate crisis needs to be understood in its entirety, one needs to recognise the needs and context of distinct social groups. This is why **communication about climate change is most effective when tailored to specific social groups**, as offered for instance by Climate Outreach, a public engagement organisation which tailors its outreach programmes according to the specificities of different types of communities.

13. The two frameworks (TPB & SIMPEA) can be combined when it comes to designing behaviour change interventions. For instance, members of social groups need actual behavioural control to adopt new behaviours. However, given these are collective actors, they actually have some leverage in demanding and/or affecting changes for the actual behavioural control to be established, e.g. communities campaigning for public transport or community energy projects. **One key element both frameworks have in common are norms**. Implicit in both frameworks is therefore the need to pursue normative change, in order for behavioural change to take place.

14. **The normative change manifests itself not only in changed behaviours, but also in changed institutional practices and often changed legislation.** One can distinguish **four types of norms** (which can overlap in practice):

      a. **social norms** are maintained by sanctions that others impose on norm violators. Specifically, a violation of social norm triggers contempt in the observer who then sanctions the norm violator by avoiding or ostracizing them, which in turn could have material consequences.

      b. The operation of **moral norms,** on the other hand, does not depend on the agent being observed, the sanctioning is internalised. A violator would feel guilt at violating a moral norm, even if no one observed the norm violation, and feelings of guilt lead to the violator seeking to undo the harm. For moral norms to work, it is important that the guilt feelings are experienced as an internal conflict and are not externally induced.

      c. **Quasi-moral norms** on the other hand are triggered by the agent observing the behaviour of others and copying it, assuming this behaviour is expected, even when unobserved.

      d. Finally, **legal norms** have formalised sanctioning mechanisms, i.e. they rely on the existence of specialised enforcers rather than on more diffuse sanctions.

15. Key to the diffusion processes of new norms are **norm champions, social innovators or early adopters**. Once a critical number of norm champions within society and various social groups have adopted a new norm, and the behaviours that go along with them, social tipping dynamics within society ensure large-scale adoption.

16. Empirical research has repeatedly shown the great efficacy of behavioural change through norms intervention.[5] **Normative change can start by challenging existing norms (e.g. overconsumption) and this can be best achieved by appealing to other social or moral norms that are widely shared, such as human rights or duty of care for children**. Social movements (e.g. *Fridays for Future*) can play a key role in seeding society with new norms linking them to widely shared ones and initiating their spread through political action and political discourse.

17. The duty of care towards our children and grandchildren is an example of an existing, widely shared, norm that can be aligned with a **new climate-change norm** that has developed in response to the climate crisis. Indeed, it is a normative framework advanced by the youth climate activist movement

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[5] Grilli, G. and Curtis, J. (2021): Encouraging pro-environmental behaviors: A review of methods and approaches. Renewable Sustainable Energy Review, 135: 110039. doi: 10.1016/j.rser.2020.110039.

that is increasingly finding resonance among the wider population.[6] This normative perspective could result in a widely felt responsibility to safeguard the planetary ecosystem and its life-support system for our descendants. A representative survey in the United Kingdom found for instance that 61% were willing to pay up to £20 a month to prevent climate-change related deaths in 2050, 2080 and 2115.[7] The duty of care norm with respect to climate change could more specifically translate into anti-fossil fuel norms and norms of sufficiency, i.e. needs-provisioning with limits determined by the biophysical processes. In legal terms, this normative shift could result in criminalising ecocide or more generally greater criminalisation of environmental offences.

18. Norms are key to understand how to develop interventions to change behaviours to address the climate change agenda. **Without a change in norms, it is unrealistic to expect behavioural and institutional change**. We would therefore recommend the development of policies and communication efforts which support this normative shift, as an effective intervention towards wider action and acceptance of the changes needed to address the climate change emergency.

19. When it comes to methods of behavioural change interventions, where coercion or fines are not applicable, we can generally differentiate between nudges and boosts. **Nudges** often harness cognitive biases (e.g. peer influence through social norms) and/or mental heuristics when designing choice architectures, i.e. designing different ways in which choices are presented to consumers (e.g. the arrangements of items in a shop). **Boosts** on the other hand increase competence by providing facts and strategies for behavioural change, i.e. boosts provide factual information (e.g. contrasting CO_2e of a meat-based and a vegetarian diet) and step by step instructions (e.g. popular recipes for vegetarian dishes) to facilitate competent decision making. Both interventions should be combined for greatest efficacy.

20. **Both intervention methods can be used to advance normative change and, consequently, behavioural change.** And while nudges, in particular, tend to result in short-term behavioural change, if sufficient behavioural change is generated through large-scale intervention, they can be used to change the perceived norm, as the desired behaviour becomes increasingly observable to others. Short-term impact of nudges is then converted into long-term effects of shifting social norms. We therefore also recommend policies which focus on the development of effective nudges (and boosts).

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[6] Marris, E. (2019): Why young climate activists have captured the world's attention. Nature, 573, 471-472.

[7] Graham, H., de Bell, S., Hanley, N., Jarvis, S. and White, P.C.L. (2019): Willingness to pay for policies to reduce future deaths from climate change: evidence from a British survey. Public Health, 174, 110-117.

21. An exemplary nudge/boost intervention could be a personal carbon footprint tracker, specifying that in order to preserve the planetary life-support systems for our children, the carbon footprint needs to be no more than 2.5 tCO_2e by 2030 (nudge) and outlining effective strategies (boosts) for reducing this footprint on a yearly basis. Such an intervention could be for instance implemented in cooperation with organisations or businesses. For example, in Spain the BBVA bank offers a mobile phone app to its customers that calculates their carbon footprint based on the expenses logged through their bank account complemented by additional data entered by the users. The app also suggests courses of actions to reduce emissions and save money, with customers having access to special deals for purchasing sustainable products such as air heat pumps. A similar service is also offered by BNP Paribas in France.

I. What roles are there for considerations of fairness, individual freedoms and social responsibilities in the context of behaviour change?

22. Following on from what we have recommended in the previous section, a fine balance needs to be established between fairness, individual freedoms and social responsibilities in all interventions. **A general principle should be that interventions should target those who can act (usually those more affluent) to start with**. Coincidentally, those more affluent are usually also more central within their respective social networks and thus have a disproportionate influence within their respective social groups and hence are particularly suited as norm champions. It is hence most effective to target the affluent, firstly because they have resources to act, secondly because they are the bigger polluters (see point 26) and thirdly because they are the bigger influencers (their lifestyles provide aspirational blueprints).

23. In terms of **fairness** we have to ask ourselves who contributes disproportionately to greenhouse emissions and who is disproportionately affected by these. The emissions share of the 10% richest, highest-emitting individuals ranges from 36-49% of the global total, while that of the poorest, lowest-emitting 50% of the world's population, ranges from 7-15% of the total.[8] Oxfam estimates that to reach the global average per capita emissions level by 2030 consistent with limiting global heating to 1.5°C, the per capita consumption emissions of the richest 10% of the global population should be reduced to about a tenth of their current level.[9]

24. Some of the reduction will be achieved through new technologies, but it is not a question of either or, both new technologies and shifts in our

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[8] UNEP (2020): Emissions Gap Report 2020. Nairobi: United Nations Environment Programme. URL: https://www.unep.org/emissions-gap-report-2020

[9] Oxfam (2020): Confronting Carbon Inequality in the European Union. December 7, 2020. URL: https://www.oxfam.org/en/research/confronting-carbon-inequality-european-union

consumption patterns are necessary. This means demand side management, which often invokes concerns about individual freedoms. However, the question of individual freedom is linked to fairness: greater individual freedom for (affluent) polluters now, means decreased individual freedom for future generations, and decreased individual freedom for people in the Global South. **The question of fairness in climate change concerns not only local justice, but global and intergenerational justice**.

25. Current polls reveal that while there is strong public concern about climate change and strong support for ratchet-up climate policy in abstract terms, when it comes to making high-emission options more expensive, through taxation for instance, or even rationing or banning them, public support is rather low.[10]

26. This is partly due to a knowledge gap, i.e. lack of understanding of the gravity of the situation and how climate change can be mitigated effectively (e.g. a common misconception is that recycling is an effective way of fighting climate change), and partly due to the types of social norms and values prevalent (e.g. individual self-realisation and success signalling through consumption). This is why there is a need for a shift of perceptions, understanding and norms before behavioural change can be achieved.

27. People have accepted 'limitations' to their **individual freedoms** for the greater public good in the past (e.g. banning smoking indoors), despite some initial dissatisfaction until the new practice became established and the new norm internalised. An example relevant to climate change mitigation (as well as tackling air pollution) is the pedestrianising of cities. These measures are often met at first with public backlash from motorists, usually followed by broad public support (and support for expansion of the pedestrianised area) as people adjust and start to experience the benefits.[11]

28. It is important for a government to understand that while they should consult and seek dialogue and indeed close the knowledge gap in the population on what an effective response to the climate crisis actually requires (intervention on Appraisal (SIMPEA framework) and behavioural beliefs (TPB framework)), the goal can never be to convince everyone. The status quo bias means that people tend to defend the status quo. But once change occurs, people usually learn to appreciate the changed situation, they adjust their attitudes and adopt new social norms, though it is important to persist and not reverse policies after each initial backlash.

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[10] YouGov (2021): YouGov - COP26 main release. Survey Report. URL: https://docs.cdn.yougov.com/k5p46kl2uz/YouGov%20-%20COP26%20main%20release.pdf

[11] Meila, S. and Shergold, I. (2016): Pedestrianisation and Politics: Evidence Gaps and a Case Study of Brighton's Old Town. UTSG January 2016, Bristol, URL: https://uwe-repository.worktribe.com/preview/915484/UTSG%202016%20-%20Melia%20and%20Shergold.pdf

29. **Social responsibility** is strongly linked to the normative dimension we've been talking about above. The duty of care normative framework invokes social responsibility, but because of its emphasis on our own children and grandchildren, it goes beyond an environmental focus and it appeals to parental responsibilities, hence reducing the psychological distance to the climate crisis (i.e. the perception that the climate crisis is distant in time and space) that many people still experience. The new normative framework we recommend above can therefore become crucial for framing climate change policies, though it is key that this framework is applied consistently.

N. What should be the respective roles of different actors in delivering behaviour change, including Government, local authorities, businesses, civil society including community groups, and individuals and households?

30. To establish 1.5°C lifestyles three parallel types of efforts are required:
    - demand side management, i.e. absolute reductions in high-impact consumption (e.g. meat consumption, flying);
    - modal shifts towards more sustainable options (e.g. train journeys instead of car or plane journeys);
    - and efficiency improvements (e.g. shifting to electric cars).

    To achieve this, different actors will need to coordinate and harmonise their efforts.

31. The options with large emission reduction potentials are reducing car travel, air travel, meat consumption, and fossil-based energy usage, for instance for household heating. Clearly, behavioural changes in most of these domains will require the **government to implement policies that make climate-friendly options default options** or at the very least price-equivalent options to allow for actual behavioural control. Besides clear regulations (e.g. all new building developments have to come with high-standard insulation, an air heat pump, solar panels, an EV charging slot and access to public transport), carbon tax or carbon fees with dividends could be an option, with the latter likely to generate greater public support. People have usually negative associations with taxation, in particular if they assume that revenues from a carbon tax will just be added to government revenues, rather than being dedicated for net-zero transition. Carbon fees and dividends (also called carbon income) raise taxes on sales of fossil fuels and then distribute the revenue over the entire population (equally, on a per-person basis) as a monthly income or regular payment, which may or may not be restricted (e.g. in forms of vouchers) for spending on personal net-zero transition (e.g. installing air heat pump). Given this tax is framed as an income for the people, it is likely to be met with greater public support. Carbon tax or carbon fees with dividends are also an effective demand side

management intervention, as they inevitably make high-emission products and services more expensive.

32. We explained in the previous sections the importance of normative change and here the government plays a crucial role too. Policies mentioned above or large investments in green infrastructure for instance indicate clear commitment to net-zero transition and change. They provide clear signals both for individuals and businesses. But normative signals can also be delivered through the government acting as a role model, for instance in procurement decisions. Furthermore, normative shifts can be facilitated through legislation, such as greater criminalisation of environmental offences and increasing transparency, so that climate norm violations are more easily observable and would hence result in some form of sanctioning. The **government has therefore many means at hand to set trends for new norms to take hold in society, particularly in de-normalising (climate-)damaging behaviours such as frequent flying, cruise ship travels, overconsumption, car driving, investing in fossil-fuel economy**.

33. Given we need change at scale, the policies and interventions need to be national. But, **local authorities** can be crucial partners in implementing nationally agreed policies, as they are typically closer to the public's day-to-day realities and have a better sense of what can work at the local level. However, they should be given decision power, flexibility as well as equivalent resources to adjust national policies to the local context. Currently, local authorities are often limited in their ability to play a more active role in responding to the climate crisis (including promoting behavioural change) due to budget constraints.

34. **To facilitate modal shifts and efficiency improvements, businesses** need to provide climate-friendly choices, and many are increasingly motivated not least because they too increasingly feel the normative/moral pressure to act. But businesses need greater certainty and support from the government, embedded in a clear industry strategy to be able to transition to environmentally sustainable business practices and to be able to develop and offer ecologically sustainable products and services. Carbon fees with dividends mentioned above, could be an important intervention to facilitate that as well as clear standards and legislation (including criminalising ecological offenses).

35. **Businesses can also be a crucial partner to implement specific normative and behavioural interventions**. One example for this is given above, in point 21, through a private bank's carbon footprint app tracker.

36. Another important sector is the media industry, where the government could collaborate to encourage the promotion of new norms in response to the climate crisis, for instance through TV shows (i.e. depiction of role models), and to close the knowledge gap through educational and news content. For

example, around COP26, broadcasters such as ITV tried to raise climate change awareness through some of their most popular shows, such as Coronation Street and Emmerdale. Such initiatives are needed not only around major climate events, but continuously. Similarly important is the culture industry, i.e. theatre, music, art, they too can play a crucial role in propagating a normative shift.

37. **Civil society plays an absolutely key role, particularly in pushing for the normative shift we recommend above.** The government should embrace close and extensive collaboration links with civil society to facilitate that change. We already mentioned the key role that social movements such as *Fridays for Future* play.[12] Other examples of key civil society actors include faith community groups, as religion provides a core social identity for many people, meaning these groups will be key to shift social norms. A starting point could be the <u>interfaith initiative at making ecocide an international crime</u>. Furthermore, trade unions and other professional associations will be crucial to diffuse normative and behavioural change within social groups. Different trade unions have indeed already started their own initiatives on promoting climate change action while ensuring the transition does not leave workers behind, for instance by providing reskilling opportunities and creating new green jobs as in this <u>example</u> from TUC. The combination of specific actions across a wide range of organisations and groups can lead to a change in norms, as the discourse on the climate emergency becomes more established.

38. Likewise, third sector organisations specifically focused on the climate emergency can play a very important role, particularly those with a public engagement focus. See for example *Hope For The Future* or *Climate Outreach*, already mentioned above. **Public engagement programmes are key to help educate the wider public about the climate emergency, by supporting the normative shift needed for behavioural change, but also specifically to address the knowledge gap referred to above.** Public engagement programmes which work best are specific to the group they are working with, include active learning activities (rather than simply broadcasting information) and demonstrate the relevance of climate change to every day's lives, whilst presenting possible actions to take as a follow-up to the public engagement initiative, such as for instance swapping a specific car journey for walking.

39. One form of civic engagement which has proven very valuable to support a normative shift with respect to climate change are **Citizens Assemblies** (and similar, e.g. mini publics). See, for instance, the report on the <u>Climate</u>

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[12] Spaiser, V. (2021): "The eyes of all future generations are upon you" — how to galvanise climate action. Policy Leeds. Medium. URL: https://medium.com/policy-leeds/the-eyes-of-all-future-generations-are-upon-you-how-to-galvanise-climate-action-791f19f1d4e4

Assembly UK (a Citizens Assembly developed in partnership with House of Commons select committees). This is because deliberative methods of discussion are particularly suitable to address a complex matter such as climate change.

40. Schools and other educational institutions such as colleges and universities are also immensely important. Schools can play a key role in supporting the normative change we refer to above, as they have very significant reach with young people – all young people and children do have to go to school. By shaping young people's perceptions towards the climate emergency and its consequences, one is not only potentially affecting future generations' actions, but also acting on current practices by introducing in households conversations about day-to-day practices which may have an effect on climate change. Schemes such as eco-councils in schools are therefore invaluable. Furthermore, climate change (including climate change mitigation, adaptation and resilience) needs to be included in the national curriculum. Green economy skills training needs to be at the heart of technical colleges. This will also support businesses to deliver climate-friendly choices, increase public support for net-zero transition and facilitate normative shift as it will provide more immediate, local benefits particularly for the low-income groups.

P. How can Government best work with civil society, including community groups, to deliver behaviour change?

41. Government needs first and foremost to recognise that in order to achieve behaviour change, it does need to work with civil society. Only by doing so, will it be able to shape the normative change needed for behavioural change. The scale of change is such, that it can only be achieved by working with a very wide range of civil society organisations, from large charities to small community groups.

42. This can be done through funding that favours specific actions (and groups) focused on addressing the knowledge gaps identified above and on disseminating the norms that are intrinsic to a climate-friendly normative framework.

43. Besides actual funding, the government could institute different types of prizes that encourage this type of initiatives. Prizes may range across types of groups (e.g. trade union prize, local community small charity prize etc), but also in terms of types of actions (e.g. scale of change of behaviour, best community engagement programme etc). This could be set in a holistic manner, across government, but all government departments could also establish their own specific prizes (i.e. from Defence to Education).

Recommendations:

On the basis of this evidence, we therefore recommend the following:

- the development of policies, practices and communication efforts which support a normative shift towards norms that safeguard planetary life support systems such as the climate;
- the development of effective, large-scale *nudges* (and *boosts*) that go beyond creating specific, short-term behavioural changes by facilitating a shift in social norms;
- that government works with a wide range of actors, namely local authorities, education sector, business and civil society, to support a normative shift and deliver nudges and boosts interventions;
- the support and expansion of public engagement programmes that address climate change knowledge gaps and help disseminate a normative framework that promotes planetary duty of care.