

EUROPEAN
ROUNDTABLE
ON THE ROLE
OF BEHAVIOUR
FOR NET-ZERO



FOOD



ENERGY



MOBILITY

CONSIDERATIONS FOR POLICY AND COLLABORATION ON SUSTAINABLE BEHAVIOURS

Insights from a European Policy Roundtable

In partnership with



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Considerations for Policy and Collaboration on Sustainable Behaviours: Insights from a European Policy Roundtable

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EXECUTIVE SUMMARY

Behaviour change has a critical role to play in achieving net-zero. More specifically, behaviourally informed insights and solutions are needed to make the transition possible and easy for all people. And it's not only consumer behaviours that we need to focus on. It is also the behaviours of people in places like governments, businesses, workplaces, communities or schools.

The European Roundtable on the Role of Behaviour for Net-Zero followed the release of the IPCC's 6th Assessment Report on mitigation, including demand-side measures, and brought together policymakers, academics, and representatives of industries and non-governmental organisations from across Europe to reflect on the findings, and discuss the application of behavioural science in support of the net-zero transition.

The first objective of the roundtable was to learn from real-life initiatives where applying behavioural science has been instrumental in encouraging sustainable behaviours around food, mobility and energy consumption. These examples were drawn from the policy, academic and industry sectors, and helped kick start discussions on challenges and opportunities.

Among the challenges discussed, the difference in pace between science and policy, and the influence of lobbies were perceived as the main limitations to progress. Regarding opportunities, the participants discussed the importance of focusing on high-impact behaviours that will make a real difference to emissions levels, including dietary

change and meat reduction, sustainable mobility behaviours, and reduced energy consumption. Behavioural interventions such as the use of social norms, choice architecture, or incentives, that have been proven to effectively encourage these sustainable behaviours, could be further scaled up and implemented across sectors.

The second objective was to identify the first elements of a common research agenda to align the needs of policymakers, academics, industries, and practitioners, and bridge the knowledge and evidence gaps in behavioural science. Only by doing this, will we be able to better define demand-side solutions.

The general consensus was that more time and funding should be allocated to behavioural research – a “messier” type of research that requires longer timeframes – and that interventions should be scaled up and validated across sectors. The overarching suggestion was therefore to take a systemic approach, and act on different levels simultaneously, to support lifestyle changes through structural improvements.

Key recommendations to do so include: improving policy literacy and educating policymakers about behavioural change processes, making behavioural science a compelling offer for industries, engaging the civil society, collaborations with an extended number of sectors, and acting locally.

Finally, the roundtable aimed to consider the potential for a sustained exchange platform to develop and maintain collaboration in the long term. Participants demonstrated a

strong appetite to continue discussions beyond the roundtable, and suggested a number of mechanisms to do so.

It was highlighted that smaller, and more topical sessions, could help foster discussions across sectors, and that online tools could be used to exchange best practices on a more regular basis.

The roundtable marked the start of a cross-sector, transdisciplinary, and European collaboration that will help foster behaviour change and efficiently support the net-zero transition.

INTRODUCTION

The IPCC's 6th Assessment Report section by Working Group III on demand, services and social aspects of mitigation is clear: **we need behaviour change to reduce demand and reach net-zero targets by 2050.**

According to this new chapter, food, land transport, buildings and electricity, are the sectors that comprise some of the largest percentages of total greenhouse gas emissions (GHGE). **And they also are sectors in which end-use interventions would be the most efficient in reducing emissions.** The low-carbon behaviours associated with these sectors are however deeply ingrained in everyday practices, habits, cultures and lifestyles, and it will take substantial efforts to change them.

In addition to emphasising demand reduction, the IPCC report stressed the importance of behaviour change, and the need to go beyond an individual focus to develop structural changes and quality services that will support sustainable behaviours.

The need for a coordinated approach across sectors and actors is therefore clear and urgent. Effective policies and interventions, together with improvements in infrastructure and technologies, have the potential to support behaviour change, and could help reduce emissions by 40% to 70%.¹ Policy-makers, industries and academics, among others, are key to developing these solutions.

As the IPCC Working Group III report states, options exist across sectors to halve emissions by 2030², but we have to start acting together rapidly to harness the 'untapped potential'³ of behaviour change.

These changes would also have positive consequences on people's well-being, quality of life and health. The IPCC notes the potential for improvements in life expectancy from reduced levels of pollution, increased levels of physical activities and the adoption of healthier, plant-based diets – all of which would also reduce resource consumption, energy demand and greenhouse gas emissions.

It is however crucial to ensure that these changes are fair for all. Today, 10% of the population is responsible for 50% of global emissions.⁴ We, as countries of the Global North, have a particular responsibility to significantly reduce our carbon footprints. We have the highest capacity to do things differently, and pave the way to more sustainable lifestyles.

With this in mind, the **European Roundtable on The Role of Behaviour for Net-zero** brought together over 50 policymakers, academics, and representatives from industry and non-governmental organisations from all over Europe, to discuss the role of behaviour for reaching net-zero.

More specifically, it was a first step in the establishment of a sustained collaboration across sectors and countries in order to:

- Learn from real-life initiatives where applying behavioural science has specifically been instrumental in changing individual behaviours to address unsustainable consumption.
- Identify sustainability-related behaviour change best practices, including ones from the IPCC's 6th Assessment Report, that policymakers could implement into their demand-side climate policies.
- Shape the research agenda in order to align the needs of policymakers and practitioners and bridge the knowledge and evidence gaps in terms of how behavioural science can help define demand-side solutions.

Participants demonstrated a strong appetite for concrete actions to scale up the use of behavioural science, and support the net-zero transition.

The present report summarises the key points from the two days of discussion, organised around four sections, i.e.:

1. **High impact behaviours across the food, energy and mobility sectors.**
2. **Lessons learnt from behavioural science.**
3. **A roadmap for action, based on a number of tangible recommendations.**
4. **Last but not least, opportunities to further collaborate beyond this first roundtable.**

1. "The indicative potential of demand-side strategies across all sectors to reduce emissions is 40-70% by 2050 (high confidence)." Creutzig, F., J. Roy, P. Devine-Wright, J. Díaz-José, F.W. Geels, A. Grubler, N. Maïzi, E. Masanet, Y. Mulugetta, C.D. Onyige, P.E. Perkins, A. Sanches-Pereira, E.U. Weber, 2022: Demand, services and social aspects of mitigation. In IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi:10.1017/9781009157926.007

2. <https://www.ipcc.ch/2022/04/04/ipcc-ar6-wgiii-pressrelease>

3. <https://www.ipcc.ch/2022/04/04/ipcc-ar6-wgiii-pressrelease>

4. Gore, T., Astelig, M., 2020: Confronting carbon inequality in the European Union. Oxfam Media Briefing. Available at: https://oi-files-d8-prod.s3.eu-west-2.amazonaws.com/s3fs-public/2020-12/Confronting%20Carbon%20Inequality%20in%20the%20EU_0.pdf

1. HIGH IMPACT BEHAVIOURS



(Image: Pexels.com)

Behaviour change will only help in achieving net-zero targets if the behaviours targeted are **specific, high-impact and realistic**. For the purpose of this event, behaviours were classified as substitution behaviours and new behaviours.

Substitution behaviours are different ways of performing current behaviours in existing contexts. They rely on existing infrastructure and services. For instance, using electric vehicles to replace the use of conventional cars can be considered a substitution behaviour. There is currently space to further encourage these behaviours in the food, energy and mobility sectors. However, it is worth noting that the promotion of substitution behaviours is typically less ambitious and far-reaching than promoting new behaviours, because it doesn't involve significant changes in context.

New behaviours are those that would necessitate a change of context or more wide-ranging changes to lifestyles, including the development of new infrastructure and services. Promoting new behaviours necessitates re-imagining and rethinking how we live. For instance, working from home more frequently could be considered a new behaviour, because it implies a contextual change in which employers agree to a new way of working.

While most of the behaviours discussed in the topic sessions have been included in one of those two categories, others have been more nuanced and therefore more difficult to categorise. They however remain important to consider, and as they are part of a continuous effort towards more sustainable lifestyles.



"The way we have changed dietary behaviours over just one generation shows us that it is possible to further change them."

According to the IPCC Working Group III, **food is the sector with the highest potential of demand-side emissions reductions through dietary shifts.**⁵

However, consumers' needs and preferences should be considered and understood.

According to participants, the nutritional aspects of the alternatives, their protein content, taste, and price are among the factors influencing people's choices. This could explain why legume-based alternatives, although one of the healthiest and less-processed options, is one bridge too far for many consumers. In initial stages of plant-based diet shift, products combining plant and animal edibles may help to overcome consumer reluctance.

Substitution and new behaviours are part of a continuum, with substitution being a first step to move consumers towards new behaviours, which need to be accompanied by an increased availability of new foods and food categories.

However, when it comes to meat substitution, it is important to wonder whether the consumption of meat alternatives might perpetuate people's desire for meat. A new behaviour would therefore be not just to replace meat, but to make plant-based foods and meals the default, and by implication meat consumption the exception.

Despite the IPCC WGIII call for more urgent and drastic measures at consumer level, participants suggested that gradual reduction of meat (with increased meat substitution) could be a first move, with the sight of transforming the way Western populations eat today.⁷

The point was made that, in some countries such as Sweden, where the climate doesn't allow for the production of cereals and vegetables, 100% plant-based diets might not be the most feasible option. In those countries, natural pastures, on which smaller cattle could graze, could provide enough food for periods of limited availability, and help retain biodiversity.

While this could be part of the solution in Europe, it is important to consider the larger-scale effect that this could have worldwide. Presenting meat as a luxury has made meat consumption an aspirational behaviour in Europe and the Global South. Populations that are currently vegetarian, as they improve their economic situation, might want to follow the path of Global North countries, and increase their demand for meat.

More reflections and research are needed to determine the conditions under which new food-related behaviours should be presented. A segmented approach might be needed to target different groups of people in the best possible way.

Dairy substitution, although currently 'under the radar', is another step towards sustainable diets, and should be promoted more intensively, as it is in fact part of the meat system.

A strong reduction in the consumption of meat, in particular beef and lamb, and dairy is particularly important in Western industrialised countries. Such a shift could contribute to reducing methane emissions resulting from agriculture and intensive livestock, which are still increasing to date, and help limit the negative impacts of farming on natural resources, ecosystems and biodiversity.⁶

In the roundtable discussions, meat substitution dominated discussions around sustainable dietary behaviours, given that meat is the foodstuff with the largest greenhouse gas emissions. **Yet, knowledge is still scarce on the right meat substitutes to promote, considering the economic, environmental and health impact of different options.**

Participants reported that there is an openness from the general public to try meat alternatives, including those obtained by bioprocessing and precision fermentation.

5. Creutzig, F., J. Roy, P. Devine-Wright, J. Díaz-José, F.W. Geels, A. Grubler, N. Maizi, E. Masanet, Y. Mulugetta, C.D. Onyige, P.E. Perkins, A. Sanches-Pereira, E.U. Weber, 2022: Demand, services and social aspects of mitigation. In IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi:10.1017/9781009157926.007

6. Nabuurs, G.-J., R. Mrabet, A. Abu Hatab, M. Bustamante, H. Clark, P. Havlík, J. House, C. Mbow, K.N. Ninan, A. Popp, S. Roe, B. Sohngen, S. Towprayoon, 2022: Agriculture, Forestry and Other Land Uses (AFOLU). In IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi:10.1017/9781009157926.009

7. Pechey, R., Bateman, P., Cook, B. et al. Impact of increasing the relative availability of meat-free options on food selection: two natural field experiments and an online randomised trial. *Int J Behav Nutr Phys Act* 19, 9 (2022). <https://doi.org/10.1186/s12966-021-01239-z>



“The best way to approach substitution behaviours in the mobility sector is to take a 360-degrees approach to policy changes in order to reduce car use.”

Roundtable discussions around sustainable mobility focused first on **the increase of substitution behaviours, such as active travel or the use of e-bikes or public transport.**

When it comes to active travel, participants in the roundtable stressed that efforts are still needed to make cycling easy and attractive to people of all socio-economic and cultural backgrounds. **Part of this implies adapting services and infrastructures to enable and support individual changes.**

It was also agreed that the promotion of substitution behaviours should consider the most common transport purposes, and focus first on those that are easier to change. In this perspective, changes to utility-driven trips, such as running errands, could be prioritised, followed by work-related trips and commuting, and finally school runs. **However, fairness needs to be considered as such changes might not be feasible for all.**

For some people, not having a car could indeed be perceived as a risk, especially in rural places that lack public transport connections. To target mobility in those contexts, different actors need to be involved beyond individuals. That includes employers who could enable and incentivise change among their employees.

Substitution behaviours also have limitations, i.e.:

- First, using e-bikes and e-scooters might not always be the most appropriate substitution option depending on the context. For instance, it might be better to encourage individuals to cover a 2-kilometre distance by walking instead of using an e-scooter. **These tools, although useful, perpetuate the idea that technology is the solution to mobility challenges, and increase people’s reliance on technology.**
- Second, simply increasing active travel might not reduce car usage. In urban contexts especially, an increasing number of transport options are becoming available, which could **lead to an uptake in multimodal transportation, but which might still allow for car usage.**

Thus, in addition to encouraging the use of alternative modes, **reducing car dependency appears crucial according to some of the key messages from the roundtable, although it is a behavioural challenge in itself.** Consumer attachment to car usage is embedded in everyday routines and family, and is attached to status motives. It is also symbolic of different life stages, such as parenthood or early adulthood.

Car usage is also dependent on the way cities and towns are designed. Currently, driving is the default in many places because of the lack and higher costs of alternative transports.

New behaviours, such as the use of shared mobility and car clubs, could account for this dependency but reduce the overall impact of driving at the same time. Careful considerations should however be given to gender differences and preferences, to ensure that shared mobility is acceptable. For instance, car clubs in the UK observed that men tend to focus on the functionality and model of the car as criteria to consider using these services while women mainly looked for safety and accessibility to essential services (e.g. reaching a doctor on time).

Going a step further, car dependency could be reduced by focusing efforts on working from home – through the use of digital tools – travelling less, and choosing local destinations. These new behaviours could also be encouraged to reduce flying, currently the most carbon-intensive and least equitable form of transport.

However, the social impact of these behaviours should not be underestimated. While shared mobility might create new social contacts, virtual tools might lessen the quality of interactions between people over time.



“With only 10 years to act, behaviour change is needed to complement technological expansion and the use of renewable energy.”

The substitution behaviours highlighted in the roundtable discussions vary from reducing the average temperature in houses to 18° Celsius, to insulating our homes, and, where and when possible, switching to renewable energy.

The adoption of smart technologies in this context is also particularly important to enable and support the efficient usage of appliances and heating systems, and enable demand-side flexibility on a systems-level.

Encouraging energy efficient behaviours also means adapting the context and infrastructure in order to create the conditions that will allow people to adopt sustainable behaviours. In light of this, participants suggested that honest and realistic goals should be set, acknowledging that there is a limit to how low we can go in reducing demand without such contextual changes.

As highlighted in the discussions, consumers will soon be faced with new kinds of choices. Both automation and

energy communities – in which people will be able to exchange and trade renewable energy with each other – could soon help regulate the energy supply in a more sustainable way.

Research shows that individuals would be open to give up full control to automated systems, if given the choice. **In the absence of that, the circumstances under which they would give up control need to be further explored.** For instance, situations such as extreme events might simultaneously increase the need for automation and individuals’ need of control, leading to potential mass override of the systems at critical times. Trust in suppliers is also one of the prerequisites to the implementation of automation in households.

According to participants, both of these new behaviours also require the development of prosocial thinking within the population to ensure that the needs of all the people in the community are considered, and to avoid conflicts in the coordination of energy usage. **Collaboration and regulation mechanisms need to safeguard communities from free-riders.**

Fairness is another critical consideration. Automation might be easy for some individuals, but might include changes to a range of behaviours for others.

Energy communities might benefit some people over others, especially those having connections with energy sellers within the community.

Finally, when it comes to energy behaviours, the rebound effect – that leads individuals to consume more energy, for instance, after renovating their homes – also needs to be accounted for. While it is difficult to measure, we know that it exists, and **policy should be reappraised often to adapt levels of ambitions and energy reductions accordingly.**

2. LESSONS LEARNT FROM BEHAVIOURAL SCIENCE



(Image: Pexels.com)

Thanks to developments in behavioural science, we now have a good understanding of people's motivations and state of knowledge when it comes to food, energy and mobility behaviours. **While research is still needed, it is time to build on what is known, expand the application of this knowledge, beyond academia, and support it through structural changes.**

One of the recommended ways to reach net-zero is to combine interventions, and tailor them to specific populations and contexts. Overall, a few key considerations of timing, context, fairness and accessibility should be considered before applying behavioural science. We know for instance that tools such as information-based interventions are not enough to bridge the intention-behaviour gap, and are likely to increase social inequalities. **They should therefore target the entire population, including low-income individuals, and be accessible for all.** In addition, interventions such as incentives, regulation, and changes to the choice architecture, appear as crucial levers to complement information, and maintain equity among the population.

If the transition is to be equitable however, wealthier individuals, who have more resources but also disproportionately high carbon footprints (e.g. due to behaviours such as frequently flying) need to be targeted. Accessibility also needs to be accounted for in the design of interventions, particularly on topics such as mobility. Sustainable transport needs to be accessible to all, including people with disabilities or limited physical capability, and those living in rural areas.

Finally, it is crucial that the interventions presented below be complemented by wider **structural changes in order to have a significant impact on behaviours.** Social norms, choice architecture and incentives, as efficient as they are, are only part of the solution, and need to be supported by larger-scale policies and initiatives. Structural changes are necessary, for instance infrastructural improvements in the mobility sector, or technological innovations in the energy sector, as highlighted by the IPCC's 6th Assessment Report section (by Working Group III).

CHOICE ARCHITECTURE

Choice architecture refers to the practice of influencing choices by presenting information, organising the context, and offering choices in ways that impact decision-making.

Choice architecture can take different formats and be useful to encourage sustainable behaviours across sectors.

In the energy sector, using default options – options that have been pre-set for the user – have been shown to increase the uptake of green contracts. It could be expanded to increase the usage of renewables, and the acceptance of automation, as long as people are given the choice and the freedom to take back control.

Participants also discussed nudges, i.e. interventions that gently steer individuals towards a desired behaviour, without forbidding any other options, or providing economic incentives. Nudges can be particularly useful to help consumers tackle the 'last-mile', or the critical moment at which we need them to take action, for instance when they need to fill up the form to subscribe to new energy contracts.

This is a problem that governments struggle with. **Despite financial incentives, there is often a lack of uptake of the programmes and services they propose, which can be explained by individuals' bounded rationality.** Bounded rationality refers to people's tendency to make satisfactory rather than optimal decisions, due to a lack of information, cognitive ability, or time.

More radically, the options of buying inefficient products could be closed for consumers to make the choice of sustainable products easier for them.

When it comes to dietary behaviours, default plant-based options can encourage more sustainable diets in specific contexts, such as restaurants and canteens. Changing the position of sustainable products in stores or on menus also is an adequate intervention, keeping in mind that putting meat and non-meat products next to one another might allow for comparisons and competition – which might either favour the more familiar options, i.e. meat or other animal sourced foods, or cue people to use alternatives instead.

In the mobility sector, changes to the choice architecture might be required at a higher-level, to limit the mobility options available to people in specific contexts. This has been done in France by forbidding short internal flights, or more generally by restricting access to specific cars in cities for a short period of time.

SOCIAL NORMS AND PRACTICES

Social norms and the promotion of shared social practices provide powerful opportunities for changing behaviours across sectors. In the mobility sector, cycling community clubs, and cycling networks can participate in making cycling the new norm. Regarding the uptake of renewable energy, social norms play a role in expanding the purchase and use of solar panels, and their potential to increase home insulation could be further explored.

In the discussions, the family structure was also considered a powerful motivator of change. While young people are more likely to push sustainable dietary changes within their families, parents have a role to play in moving the family culture away from car dependency through education.

Within industries, modelling, if based on good evidence, could promote sustainable initiatives. **Modelling implies highlighting an observable example of best practice, for other industries to aspire to or imitate.** The idea here is that a particular policy adopted by a big company will be looked up by other companies.

Other discussed interventions include goal setting, cycling training, or energy feedback (although the effectiveness of those might be limited in time).

FRAMING

Many of the things we can do to limit climate change as individuals have wider benefits on our wellbeing. Framing sustainable behaviours as healthy behaviours, especially when it comes to food and mobility, could motivate change among a wider group of people. **Highlighting the health dimensions of those behaviours could also be a convincing argument to prompt policymakers into action.**

Information could also be framed in a way that responds to, and anticipates, specific concerns, for instance by presenting active travel and public transport as being convenient and safe.

INCENTIVES

To effectively achieve behaviour change, the use of financial tools could complement information-based interventions. Incentives could be used to encourage sustainable food consumption and mobility. They could prompt the use, or at least the testing, of novel modes of transport such as e-scooters, and of sustainable food alternatives. On the other hand, disincentives, such as ticket taxes, could discourage flying or driving.

More research is needed to better design incentives, and make them more attractive. Efforts could also be focused on identifying efficient non-monetary incentives, to appeal to and prime biospheric or social values.

PRICING

Current prices often encourage unsustainable behaviours or the purchase of inefficient devices, be it in the food or in the energy sector. This could be addressed by including externalities in the pricing of certain food products. **However, acceptability is key in certain contexts, and pricing doesn't necessarily mean that everything should be costly.** Care should particularly be taken to avoid increasing the overall financial burdens, especially for low-income households.

LABELS

From an industry-perspective, labels can become a competitive advantage for companies, beyond price tags. **To drive consumers' choices, labels however need to go further than information provision, and become real indicators.**

In the food sector, labels currently include information about the climate footprint of products, but there isn't a clear understanding of the best way to implement them to date. **Labelling might attract individuals who are actively looking for labels, but not others.** To increase their impact among the wider population, efforts should be focused on presenting them in different formats in different places, and on making them more eye-catching.

More generally, labels should be implemented in a coordinated manner, and requires alignment across sectors on a national and international scale.

These behavioural tools have been used across sectors, and are those that stood out the most in the roundtable discussions. **Yet, it is important to note that encouraging behaviour change requires wider changes, to complement and support the use of such behavioural tools.**

STANDARDS AND LEGISLATIONS

Just like structural change complements individual change, standards and legislations can complement behavioural interventions. In addition to voluntary change, there is a need for adequate standards and legislations that support, rather than hinder, the development of sustainable behaviours.

These structural tools can help create legislative barriers to the use of high-carbon commodities and services, but need to be fair, and consider the needs of different parts of the population.

3. A ROADMAP FOR ACTION



(Image: Pexels.com)

“We are part of the solution but we need to work in a coordinated and evidence-based way.”

Any problem that requires a change in human behaviour needs to follow a systemic approach. Many of the aforementioned behavioural interventions therefore have to be supported by technological, infrastructural, political and industrial changes if we want to reach net-zero targets on time.

For instance, cities need to be redesigned to allow sustainable transportation to become the default and cheapest way to travel, and thus encourage low-carbon mobility behaviours. The end user cannot be our sole focus, and policy in isolation from other sectors will have limited effect. We need to act on many levels simultaneously. **Similarly, cities need to re-think the provision of public meals to make them sustainable.** This requires changes in supply chain, as well as in the design and production of meals.

There is currently a lack of skills and tools in behavioural science to approach problems at the system level. This gap needs to be addressed by acknowledging that any behaviour change intervention is only one aspect within the system, and that behaviour change interventions are necessary but not sufficient if implemented alone.

A first step in doing this is to consider all influences on behaviours, including the blocking points at different levels. There is a need to look beyond individuals and to:

- Identify the different actors of a system, from enablers to obstructionists, who could limit or encourage the adoption of more sustainable energy, food and mobility behaviours.
- Understand their needs to determine co-benefits and wins-wins-wins.
- Precisely define their roles and tasks in this context.
- Engage them with arguments that resonate with them.
- Empower them with the knowledge of behavioural science methods and tools to help scale up interventions.
- Accelerate transdisciplinary research.

RECOMMENDATION #1: Work with and for policymakers

The pace at which policy and science evolve, and the needs that they respectively have to address are different. These vary depending on the wider political context, and on the topics that need to be prioritised at specific times. Current policymaking processes tend to limit the efficient implementation of behaviour change interventions.

Political participation in the policy-making process indeed results in a considerable back-and-forth motion which often leads to a shift from original ideas and limits the incorporation of behavioural science into climate policies. This nonlinearity also means that interventions need to be constantly adapted to political imperatives at different stages of a project. Other times, interventions are incomplete or not appropriately executed.

A shift of mindset is needed in the political sphere to increase acceptance and usage of behavioural science in the context of the net zero-transition. First steps towards acceptance and collaboration include:

- Increasing policy literacy to improve policymakers' understanding of behavioural science.
- Ensuring that researchers understand and challenge political imperatives.
- And considering the political agenda when launching partnerships.

Just like the rest of us, policymakers are boundedly rational, which means that better-quality and evidence-based information might not necessarily drive them to implementing solutions. Researchers and behavioural experts need to cut through the evidence to facilitate their understanding of behavioural science and behavioural interventions. To that end, communication needs to be improved, particularly between academia and policy.

This involves communicating more often, and in a more transparent way, and being honest about the major upheaval and changes required to achieve behaviour change at the scale and speed needed.

A more accessible language could be developed to move policymakers in the right direction. Part of this could be to focus on prioritising specific interventions and highlighting their potential impact, were they to be scaled up. Taking a more positive perspective, by highlighting chances of success, could counteract initial reluctance and the perception of political risks. It might imply going beyond financial arguments, and focusing on the cascading benefits of interventions, such as the health advantages that they could provide.

Another challenge lies in the evaluation of interventions. Where policy usually has to be implemented fast, research has to go slow. There is therefore limited room available for testing and experimenting.

Solutions to this could be to better involve policymakers in the process, and convince them of the value of evaluation. Evaluating interventions would necessitate increased flexibility on their part, but would be particularly useful to adapt policies and increase their efficiency. An alternative would be to lower the threshold of acceptable evidence, and to put more weight on conversations.

Researchers in governments and secondments are well placed to act as knowledge ambassador, connecting research teams and policy-makers, while understanding policy imperatives. They can help find ways to speak a common language.

Similarly, innovation agencies, as they exist in Sweden, behavioural insights teams or climate councils have a good understanding of the political context, and can be good allies in integrating behavioural knowledge to policies and in suggesting sustainable policies.

Behaviour change is not a possibility, but a certainty. Policymakers have the opportunity to encourage voluntary change from the population to limit the effects of climate change, which could otherwise end up forcing unavoidable changes on people's lifestyles.

RECOMMENDATION #2: Make behavioural science a compelling offer for industries

Behavioural science represents a commercial opportunity for industries. A first step could be to focus on involving early-adopters, and industries whose goals already align with the net-zero transition. The cycling industry could be further exploited for instance, to make cycling as attractive as possible.

To engage other industries, it is important to bring the experts to the right people, those with impact, such as senior executives, and to speak to them in terms that resonate. Where possible, it is also important to talk to 'corporate disruptors', those that are redefining their business models to support the transition, and that can act as agents of change.

Behavioural science should not be perceived as too time- or energy-consuming compared to the return that it might bring. **This is why it is crucial to highlight the return on investments that the use of behavioural science could provide, both financially and environmentally, to make it a compelling offering.** That would simultaneously require the addition of sustainability KPIs to already-existing financial KPIs, to ensure that efforts go beyond informational campaigns.

It is also important to demonstrate that sustainability can align with industrial priorities, and that it is what many consumers currently demand and expect.

Presenting the use of behavioural science as a competitive advantage could also help engage the industry. Highlighting the innovative side of behaviour change could become a convincing argument. In this context, modelling by informing about the best practices of leading companies might be more effective than encouraging industries to conduct experiments.

Some businesses could set the tone by adopting sustainable policies and initiatives, and become real examples to look up to. Modelling should however be based on evidence, which can be difficult to get in real-life contexts.

Alignment between industry, academia and policy is therefore necessary on that front. Policymakers have an important role to play in funding innovation and technologies, and in supporting industries that produce efficient products, or encourage sustainable behaviours. Alternatively, they could intervene in markets to limit the production and trade of carbon-intensive products, although this might be difficult, considering lobbying pressure. Academics on the other hand should be prepared to collaborate and educate.

Some sectors, such as the food sector, are known to be relatively open and motivated to use behavioural science. Yet, there is still a lack of knowledge on what works best and what to try.

Businesses and industries need end-to-end solutions and support; from the definition of their problem, to insights on solutions and execution. This is important to fully engage them, and ensure that they link in the relevant actors.

Beyond changes to industrial practices, businesses also have a **role to play in promoting and supporting behaviour change among their employees to enable for more sustainable lifestyles**, e.g. work from home, or reduce work travel.

Corporate sustainability practices should be more ambitious and focus on the delivery of positive impact, rather than being limited to damage control and to the avoidance of negative effects. Collaboration across sectors could here again be beneficial to share best practices and motivate innovative approaches.



(Image: Pexels.com)

CONSIDERING POLITICAL AND INDUSTRIAL CHALLENGES

It emerged from the roundtable discussions that political controversies and lobbying are part of the challenges faced in the encouragement of sustainable behaviours. **Politicians are in a different place than the public because of lobbying pressure.**

Meat and dairy lobbying are particularly sensitive issues that limit the type of interventions that can be put in place on a government-level. This lobbying can also lead to harmful legislation, such as the aborted 2019 EU Veggie Burger Ban, that can easily undermine behaviour change efforts. Subsidies granted to specific industries, such as the School Milk Subsidy Scheme in the UK, have the potential of ingraining new norms into people's lives.

Similarly, in the mobility sector, the development of car-free cities is restricted by the powerful interests of car industries that currently benefit from car dependence. Investments in infrastructural developments, such as road building, airport expansions, or new fossil fuel infrastructures, are sending the wrong signals to individuals, who are told that they need to restrict their car usage, stop flying, or switch to renewable energy, but are simultaneously locked into undesirable behaviours.

Political courage is therefore needed, on a national and European-level, to step away from those pressures and to remove regulatory obstacles that hinder sustainable developments. Policy needs to be bold. An example of political courage is the moratorium on road building that the Welsh government recently imposed in recognition of the climate emergency.

This said, it also is worth noting that policymakers' decisions to act (or not to act) are affected by the perceived political risk – and certainly the fear of public and media backlash. Therefore, the level of ambition of government policies are likely to be curtailed to the perception of public acceptance. **This means evidence behind public support for progressive (and perhaps invasive) policies are important to empower, or demonstrate political mandate, for said policies.**

RECOMMENDATION #3: Support behavioural science and trans-disciplinary research

Valid research is still needed to understand what works and in which setting. It is not just about replicating what has been done in other contexts, it is also about finding new insights altogether. Many organisations could build on behavioural insights to turn their interventions into validating ones, sometimes by simply changing their design.

Highlighting that those real-life activities can become strong evidence and might reduce reluctance among academics to engage in collaboration. It is important to show them that they can learn from communities, at a grassroots-level, and from the wider public in general.

The funding landscape should also evolve, to incentivise researchers to demonstrate the societal impact of their research. This also means timeframes should be lengthened to support this type of research, that requires time and an in-depth use of behavioural insights.

Referring to what was previously mentioned, a better understanding of the behavioural change process, of what it requires, and of how long it takes, might be a first step in encouraging policy-makers and funders to extend timeframes.

There is also a pressing need for scientists to join forces and combine their areas of expertise in order to advance behavioural science research.

Transdisciplinary research is essential if we are to take a systemic approach to the net-zero transition, but there is currently a lack of working space to do so. **To overcome this, the funding landscape would need to change to provide funding schemes that will benefit projects with impact.** More space and time need to be allocated to transdisciplinary research for societal good, as it often requires longer processes. Initiatives similar to the Dutch National Science Agenda, which was based on the input of citizens and scientists, and whose goal is to “utilise knowledge to make a positive, structural contribution to the society of tomorrow” could be exported to other countries.

Research collaborations across sectors could be strengthened via the development of industrial PhD positions and policy fellowships. These would allow doctoral researchers and research fellows to learn from the field, and bring their expertise to industries and governments seeking to use behavioural science in the context of the net-zero transition.

On the other hand, industries could be prompted by policymakers to contribute to policy experiments in the field.

There is indeed value in running experiments and trials in real-world settings, beyond a university-context. Industrial partners such as energy providers or food retailers could be supported and encouraged to run pilots with significant sample sizes. Experiments could then reinforce each other across sectors.

To improve policies and interventions, qualitative and quantitative data, insights, and lessons learnt will have to be shared. **The creation of information sharing systems, feedback loops and the establishment of a common language therefore is necessary.** Over time, this could result in a database of efficient and evidence-based interventions.

RECOMMENDATION #4: Diffuse knowledge and scale up behavioural interventions

Net-zero behaviours need to be encouraged across industries, governments, NGOs, universities and countries. **There are many actors to involve and empower to scale up and take interventions forward.** To do so, behavioural insights, tools and methods have to become more widely accessible.

Encouraging collaboration is essential. But the challenge is also to create a system that will ensure that initiatives are being developed, and that change is maintained in the long-term. Teams across sectors will need to be able to use behavioural science, sometimes independently, without relying on the help of experts. Behavioural science training is therefore key to scaling up interventions. Teams should be trained to science-based methods and techniques but also equipped with practical tools.

Robust frameworks and models, such as COM-B, have been created by experts to help people who are not trained in behaviour change apply behavioural science. These models take new practitioners through practical steps to analyse behaviours, and to select the right behavioural interventions to implement in different contexts.

All-in-all, behavioural science training should not take too much time, and burden policymakers, industries and organisations. It has to be a simple offer. To increase efficiency, internal capacity building could also be created, by training the trainers, to empower teams to bring behavioural science forward.

To have a global impact, behaviour change knowledge will need to be exported across countries. Collaboration and discussions are needed to determine how to create a movement that can be actioned in different places, while accounting for geographical and cultural differences.

RECOMMENDATION #5: Collaborate with other sectors

There is an opportunity to engage with other sectors to understand their needs and collectively identify sustainable co-benefits. On the one hand, behavioural science could help them achieve their goals and improve their services. On the other hand, these other sectors could become enablers of change, and relay and support behavioural science interventions on different levels:

Urban and environmental planning

Discussions highlighted the need to collaborate with the planning sector, particularly in the context of mobility. This is all the more important considering that, as the IPCC Working Group III report highlights, cities and urban areas present significant opportunities for emissions reductions. Yet, all of the solutions cannot come from the transport sector only. **Urban planning needs to be organised in a way that facilitates changes.**

Disparities currently exist between older historical towns that are more bike-friendly, and new cities that favour car usage. Safer roads and segregated cycling paths are needed to enable people everywhere to walk or cycle to their destinations. Safe bike storage also needs to be accessible.

On the technological front, encouraging the use of electric vehicles will hit a wall if cities don't have not enough space or chargers to accommodate them. Similarly, sufficient parking spaces for e-bikes and e-scooters will have to be provided.

Health professionals

Collaboration with the health sector could capitalise on synergies to promote and deliver both healthy and sustainable behaviours, such as plant-based diets, and active travel. **Health professionals could help disseminate messages and frame them around health dimensions.** They could also help make wider concerns, such as the health impacts of pollution, more salient to policy-makers.

Farming industry

When discussing the carbon footprint of food production and consumption, it is important to consider the whole food chain. Research shows that there is a significant resistance towards the transition among farmers. **Involving those actors will be necessary to achieve the societal transition needed.**

A first step would be to engage progressive farmers first, and, similarly to industry, share insights about their best practices with others. This could help them implement practical change, could provide enthusiasm, and demonstrate what is financially viable.

RECOMMENDATION #6: Reach citizens through local authorities and NGOs

Local authorities and non-governmental organisations can be powerful agents to deliver behaviour change at a grassroots level. They have the ability to reach people and explain problems in an accessible, non-scientific way. Involving them in the co-creation process and giving them co-ownerships of projects could help consider both citizens' needs and sustainability imperatives, and adapt policies and industrial initiatives accordingly. For instance, 'localvore' movements could be championed by local authorities through procurement policies.

Local energy centres are an example of organisations who help citizens make the right steps, by giving them simple advice and tools. They know local people well, and can stimulate and facilitate their journey towards a natural gas-free home.

Similarly, school chefs, when trained, can inform about the climate impact of food, and teach students how to cook plant-based meals. They represent an important professional group in that sector, given that they can reach all school children. This has been trialled already and was deemed a positive experience that led to change.

However, partnerships with local partners need to be realistic and consider their financial limits.

RECOMMENDATION #7: Engage and co-design interventions with the civil society

A significant amount of societal transformation is needed to reach net-zero targets. However, to do this, we need to go beyond the simple provision of information, and truly bring people with us on this journey. This is not only crucial to ensure that they accept changes, it is also necessary to co-design solutions that will consider the full context of their lives.

Identifying the barriers to change in different contexts, including potential conflicts between community needs, is a first step in creating easy, accessible and affordable policies that resonate with the public. Considering people's needs and values is also necessary to better frame interventions and policies, and determine the relevant benefits to highlight to different groups. This is crucial to reduce risks of public backlash.

This is all the more important considering the type of behaviour change required. **The behaviours that we need to encourage, be they active travel or plant-based diets, will have health and wellbeing benefits.** However, some of them, such as car clubs and energy communities, will also require the creation of new social contacts and the development of prosocial mentalities. This will be particularly crucial in the mobility sector, where choices will directly affect other people's safety and wellbeing.

Policymakers will need to regulate for prosocial actions, and this might be challenging if the public is not considered or involved from the start.

People can also own the change and make it more participatory. Consumer engagement, as it is currently, can be improved on many levels. For example, in the mobility sector, people could be asked to imagine their neighbourhood car-free, and what it would take to make it so. In the Netherlands, participatory initiatives such as 'fietstrommel', allow individuals to collectively decide on whether they should replace parking spaces with bicycles parking spaces. Such initiatives could be expanded across sectors.

Citizens assemblies are a way to directly involve the public in policy-making. **Evidence shows that participatory decision-making leads to fairer policymaking, and to better-quality decisions because it factors in more views and experiences.** Citizen engagement also helps build trust and provides a political mandate for bold actions.

This could equally benefit policy-makers, as people often support change more than they might think, especially if it is fair and doesn't impose excessive costs. In this context, aligning the public narrative with advocacy could provide higher chances of political involvement.

RECOMMENDATION #8: Create a coalition

“The beauty is in collaboration.”

“We need a springboard for action.”

The roundtable highlighted the necessity of creating a coalition in order to coordinate efforts towards the net-zero transition. The right mechanisms for collaboration have to be developed in order to:

- Create a behavioural system map of actors to involve, beyond policy, industry and academia (e.g., NGOs, citizens, etc.).
- Agree on high levels of ambition.
- Establish priority questions to address and identify co-benefits.
- Set and align on ambitious but realisable and concrete goals.
- Develop a clear roadmap to achieve them (e.g., where can we act, and when).
- Implement information sharing mechanisms.
- Create training opportunities to scale up and export successful interventions.



(Image: Pexels.com)

4. WHAT'S NEXT?

Achieving net-zero targets on time will require individual behaviour change, in addition to technological improvements and innovations.

However, behaviour change is not the sole responsibility of individuals. Governments and businesses, among others, can foster and support climate actions and sustainable behaviours through wider structural changes. We need coordinated initiatives and a systemic approach to quickly create those enabling environments, but also to test interventions in different contexts.

These real-world insights will need to consider all individuals in order to design fair and efficient interventions, which could be scaled up across sectors and countries. Research with societal impact could also be advanced through funding mechanisms, specialised agencies and increased collaboration opportunities.

There is a lot to learn from current initiatives in various countries. This is why it is important to develop information sharing initiatives and continue discussions further.

Roundtable participants demonstrated a strong appetite for further discussions, and coordinated action. Various suggestions regarding ways to kickstart this coalition and keep the momentum were provided and are currently evaluated for implementation, i.e.:

1. **A LinkedIn group** – Where everyone can share information and discuss with others (potentially coupled with an email newsletter).
2. **Concrete projects** – Identify concrete goals shared by the group and develop a clear roadmap to achieve them.
3. **A list of future research** – Draw a list of important future research areas and work as a group to see the best ways to make them happen.
4. **Funding** (could be seen as a way to realise some of the other options) – Identify funding sources for this sort of projects. Alternatively, apply for project funds together.
5. **An article** – Write a perspective piece for e.g. Nature Sustainability.
6. **Further roundtable** – Organise further/regular roundtable meetings, with a clear implementational focus per each of the three sectors.
7. **Topic-specific meetings** – Alternatively, the topic-specific conversations could continue based on shorter, more frequent meetings, with a defined task for participants.
8. **Policy-led meetings** – Starting from specific policy challenges shared in advance, quickfire sharing of advice/experience and/or identifying areas that are real shared challenges that require more in-depth workshopping or new research.
9. **Face-to-face meetings** – Same as 7. and 8. But face to face and built around co-creation.
10. **Policy-research interface** – Identify how policy and research can work more closely together, for instance identifying and shaping where policy needs particular input/analysis.
11. **Expansion** – Extend this collaboration and let other (European) countries join in, and/or connect with other related work going on internationally (e.g. OECD).

EUROPEAN
ROUNDTABLE
**ON THE ROLE
OF BEHAVIOUR
FOR NET-ZERO**



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