

## Joint Academy of Medical Sciences & Royal Society Climate Change and Health Green Recovery Roundtable - Summary

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Virtual meeting, Monday 22 March (15.30 – 17.30)

**Co-Chairs:** Professor Sir Andy Haines FMedSci; Professor Joanna Haigh CBE FRS

### The green recovery through the lens of the health benefits- overarching points

Participants raised several overarching points and themes which will be important in exploring health impacts across the breadth of the decarbonisation agenda:

- **A need to place health at the centre of the economy** and ensure health co-benefits - which may not yet be widely understood - are emphasized the broader decarbonisation narrative. Increasing public health discourse around COVID-19 and events such as COP26 provide good opportunities to do so. Further public engagement, and involvement of the health community voice in policy conversations, are also potential gaps to fill in supporting this objective.
- **Ensuring policy optimisation and coherence** - with further work to ensure policies across different domains reinforce one another, supported by adequate financing for adaption and mitigation
- **Identifying potential negative impacts from the outset** - to ensure good safeguards and mitigations are in place alongside policies. Taking a wider view, which aims to better understand risks, benefits and trade-offs, could support policy optimisation going forwards and will be important in utilising a green recovery to reduce inequalities
- **Creating a positive future vision which can support health and wellbeing** –reframing the narrative around health and sustainability will be important, especially in the broader context of a current issues, such as COVID-19 and austerity policies, with potential adverse effects on
- **Exploring opportunities to hasten job transition to support the zero-carbon economy** – to reduce any potential mental health impacts of unemployment and provide healthy working conditions
- **A need for further research around behavioural change** and increased involvement of transdisciplinary research teams in this area, will be crucial for understanding and encouraging public acceptability
- **Ensuring ongoing evaluation of policies** - to ensure activities are catalysing desired impacts

### Rationale for a green economic recovery

Participants noted that pursuing a green economic recovery is a rational economic investment, even before considering health and environmental benefits, with potential in areas linked central to future societal functioning for both environmental and economic co-benefits:

- UK economic growth (78%) over the last 30 years compared to emissions reductions (43%) suggests 'decoupling' growth from fossil fuel emissions may be possible at least in relative terms, via green investment
- Emerging evidence is clearly demonstrating that **clean zero-carbon energy spending vs. fossil fuel energy has potentially a huge significance for the numbers of deaths** associated with heart disease, lung disease, and other conditions. Investments in more sustainable food systems can also make major contributions to improved health and reduced GHG emissions.
- There are **opportunities to increase the magnitude of health benefits by targeting policy in a manner which supports equitable co-benefits** e.g. home improvement investments focused on lower socioeconomic groups lead to both greater economic & health benefits
- Participants noted both significant progress and potential opportunities missed over the last year in terms of Global green investment, for both the UK and others

### The UK's Green stimulus package: 'The Ten Point Plan for a Green Industrial Revolution'

- The ten-point plan aims to set the UK on a route to Net Zero 2050, whilst also focusing on green job creation across different industries and areas of the UK. It looks to build on the UK's existing strengths, mobilising government investment in this area, whilst maintaining a strong focus on the role of private investment, supporting a levelling-up agenda (e.g. offshore wind investments) creating new opportunities to grow low-carbon markets globally (e.g. hydrogen), and supporting existing sectors (e.g. transition to electric vehicles).
- Actions will also focus around protecting and restoring the natural environment, including via the **Green Recovery Challenge Fund**.
- The plan also announced the **Green Jobs Taskforce** – a collaboration with industry which will make recommendations around green job creation, whilst considering workforce skills, quality, and diversity
- Participants noted the importance of seizing opportunities to review policy approaches and fiscal planning in considering co-benefits, particularly looking beyond cost-benefit analysis to incorporate wider factors

## The health impacts of green recovery

Participants noted that many of the focus areas outlined in the ten-point plan provide several pathways for potential health impacts. Broadly, phasing out fossil fuels and subsequent air pollution reductions will result in a reduction in fine particulates and methane (potentially reducing tropospheric ozone) amongst others, which catalyse negative health impacts, including for several key health outcomes e.g. heart disease, stroke, COPD, some cancers, and emerging evidence of effects for areas such as birthweight and cognitive function.

### Energy

#### *Opportunities*

- Several key areas outlined in the ten-point plan (**Advancing offshore wind; Driving the growth of low carbon hydrogen; Delivering new and advanced nuclear power**) offer potential to reduce air pollution, and pathways translating to associated near-term health benefits, alongside longer-term climate benefits.
- There may be further opportunities for biomass energy and carbon capture storage with research on the entire chain needed, including on regional distribution of burning. The health effects of biomass energy are context specific and there may be trade-offs with food production (see below)
- Hydrogen may provide opportunities in terms of regional job creation and positive air pollution impacts
- **Investing in carbon capture, usage, and storage** – further research is required here to better understand potential health impacts

#### *Challenges and trade offs*

- Participants noted a need to take a system-wide approach to supporting a just transition from existing to new industries particularly re-skilling, stress and mental health impacts, and avoiding inequalities
- Mitigating against regional inequalities will be important - for example in areas such as North-Eastern Scotland where shifts in oil and gas industries could see subsequent unemployment
- The need to address potential health and safety risks associated with the shift to newer industries e.g. with increased numbers working offshore
- The need to minimise adverse effects of biomass burning on air pollution and potential competition for land with food and animal feed crops.
- Considering global transition and impact - participants noted that it would be important to account for issues such as transboundary air pollution, exploring optimum ways to both support global action, sharing best practice, demonstration of localised success, and utilising forums such as COP26 to engage, collaborate and share

### Transport

Participants noted that transport decarbonisation plans carry some of the most front and centre links to health benefits, with a need for ambitions to translate to actions and regulation.

#### *Opportunities*

- **Green public transport, cycling and walking** provide benefits for health in the form of physical activity - particularly with current high prevalence of sedentary behaviours and consequent increased risk of non-communicable diseases. Increases in active travel have the potential to increase population levels of physical activity. There is a need for greater focus on increasing physical activity in research and policy to better support this
- **Increased active travel** offers further potential benefits from reduced road use by motor vehicles. Well-designed policies can reduce serious injuries from motor traffic incidents, and yield positive mental health impacts.
- **Increased public transport use** may also increase activity - e.g. walking to-and-from a daily commute
- There is considerable potential for electric vehicles (EVs) to reduce air pollution from fuel combustion but particles from brakes and tyres may be less affected. There will be a need to accompany the transition to EVs with reductions in numbers of private car users in cities to facilitate active travel and public transport .
- **COVID-19 has provided opportunities to trial new initiatives**, expediting some planned activities (e.g. scooter and e-bike trials) with opportunities to: reimagine the high-street, introduce low traffic neighbourhoods with reallocation of space for cycling, walking and public transport and encourage increases in these activities
- There is also scope for further work around **the carbon impacts of shipping**, utilising potential health impacts and wider benefits as a mechanism to drive change

#### *Challenges and trade-offs*

- The risks of widening inequalities are a particular challenge for decarbonising transport, both as a result of impacts on jobs from declining industries, and more broadly in introducing changes to transport, with a need to mitigate these risks
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- A need to integrate local and national level efforts - to ensure local level implementation aligns with national activities
- The need for greater understanding of how behaviour and activities will change post-pandemic - with acknowledgement that current COVID-19 imposed changes do not offer permanent solutions. Monitoring this over the next 12-months will be crucial in developing further understanding
- Participants highlighted controversy and push-back against some initiatives e.g. low-traffic neighbourhoods and road user charging, with a need to ensure the public is brought onboard
- A need for revisiting evidence around physical and mental health links to better understand this association and address knowledge gaps
- Reduction of COVID-19 transmission – particularly on public transport, and tackling perception of risk
- Shipping also raises further challenges to decarbonisation because the effects of pollution emissions from shipping on human and ecosystem health and from GHG emissions on climate have been relatively neglected in research and policy.

## Healthcare

### *Activities and opportunities*

- Participants noted highlighted that COVID-19, NHS re-organisation, and COP-26 provide opportunities to align future activity in responding to the longer-term crisis, ensuring Green recovery and achieving a net zero NHS by 2045
- Ongoing capacity building in this area will support these activities, and initiatives are linking to existing NHS activity, including digitising care where appropriate, and ensuring the supply chain is both resilient and zero-carbon
- Action is also being taken to address specific challenges, such as lower-GHG emissions asthma inhalers with innovations that may see a 90% reduction in the near future
- Consideration is also being given to more challenging areas such as zero-carbon hospitals, and exploring forward commitment procurement opportunities – such as for zero carbon ambulances

## Greener buildings and the built environment

### *Opportunities*

- Participants noted there was ambition to drive down the energy demands from buildings and achieve a fossil fuel free built environment, with opportunities to further explore significant links between urban design and the effects of lived environments on health
- **Greener buildings could support both air pollution improvements, reductions in fuel poverty and improved standards of living** (e.g. retrofitting with insulation and where necessary improved ventilation), This could also help avoid stranded assets which could occur without efficiency improvements
- There may be further opportunities to increase wellbeing via building modifications which decrease artificial lighting and increase natural daylight
- Increasing nature in buildings (e.g. green roofs) offers the potential for improved wellbeing, reduced heat stress, air quality and biodiversity benefits

### *Challenges and trade-offs*

- There are potential trade-offs with air pollution increases and a need to balance risks e.g. ensuring increased ventilation with filters to reduce ingress of ambient air pollution alongside insulation to address concerns around household air quality
- Hydrogen advancements pose challenges at domestic level, including potential GHG emission increases if it is generated from fossil fuel sources

## Natural environment

### *Opportunities*

- Participants noted opportunities to reduce carbon & address biodiversity issues (e.g. via increased forestry protection and reduced burning) with considerable evidence that proximity to green space has a positive influence on mortality rates, mental health, and inequalities. Addressing biodiversity issues offers further potential to mitigate against the increased incidence of zoonotic diseases such as COVID-19, and realise indirect benefits linked to urban cooling and flood risks, amongst others
- The Green Recovery Challenge Fund, aiming to progress nature projects placed on hold due to COVID-19 – may provide health benefits, alongside meeting economic and environmental objectives. An evaluation of funded initiatives will contribute to the evidence base to inform future investments
- Initiatives funded by the Green Recovery Challenge Fund include efforts to utilise social prescribing, as practiced by some GP's, to exploit the health benefits of increased contact with nature. For example the Enfield woodland restoration project, which will offer "nature-prescribing" to deliver health and social benefits

- Other ongoing work to explore links with health and wellbeing in this area include the efforts of **The Centre for Sustainable Healthcare**, which offers strategic input and consultancy on sustainable healthcare research and practice to national and local programmes. Its greenspace projects include the NHS Forest project, which is assisting organisations to improve their natural environment and to reconnect staff, patients and the wider community with local greenspace in order to benefit their health.
- Improved food sustainability and biodiversity via increases in healthy, predominantly plant-based diets also provides potential opportunities to improve health and wellbeing

#### *Challenges and trade offs*

- There is a need to consider the potential co-harms of sustainable diets, including impacts on farming industries, future land use, and impacts on Lower-income Countries who tend to export large amounts of animal-based products
- There is a need for greater understanding around healthy, sustainable diets, potential benefits and negative impacts, enabling factors (e.g. possible co-negatives due to the processed nature of many plant-based foods, with excessive content of detrimental substances such as sugar, fat and salt)
- Participants highlighted a need for a broader focus on pathways and behavioural change rather than targets – e.g. understanding causes of positive and negative dietary change during COVID-19
- Participants noted that the policy in this area is often still siloed, with a need to use strategies such as the National Food Strategy to support coherence, optimisation and change

#### **Opportunities and challenges around green careers**

- Participants highlighted **job creation potentials** in alignment with net-zero investments, with research demonstrating that investment in renewables can yield more jobs than similar investment in fossil fuels. There is further scope to highlight areas for 'quick-wins' which could produce jobs in the short term
- A comparison of the nature and quality of clean vs. non-clean jobs will shed further light on opportunities - currently, short-term green jobs tend to lean to areas such as construction, whereas long-term jobs lean towards R&D and innovation
- There are indications of **positive public attitudes** towards both meaningful and green jobs across all age groups - including recent surveys which indicate preferences for jobs in environmentally sustainable businesses and the green economy. These could provide a stimulus for green job development in the short and longer term.
- Participants highlighted the need for further work on **the transition to clean industries, and proactive transition policies** - to understand and mitigate against potential co-negatives of drastic workforce changes, including unemployment, reskilling issues, and health and safety risks. Early communication, managing expectations & increasing resilience will be critical
- Scope to further **explore mental health & stress related to job insecurity**, including stress levels associated with job transitions, and looking further at job quality
- A potential need to **incentivise firms around training provision**, with recent declines in work-related training
- Efforts should be supported with **continued evaluation** of areas where socio-economic and health benefits are not yet immediately clear

#### **Policies and investment opportunities for a green recovery**

- Participants noted the need for **a system-wide change across all areas of policy** – both in terms of developing and evaluating innovative technologies and practices and in the implementation of actions where costs and benefits are already known (e.g. reducing meat consumption)
- There is a need for a **sustainable and inclusive transition with proactive transition policies** – recognising that a more prosperous and equal society will improve health outcomes, particularly considering the exacerbation by COVID-19 of many pre-existing inequalities
- Moving forward, it will be useful to **separate out direct health benefits with more immediate impacts from indirect health benefits** (around a more fair, equal, clean and prosperous society)
- It will be important to pinpoint UK strengths - such as marine & wind technology where the UK has a good international standing, high return from investment, and opportunities to level up
- **Continued evaluation of socio-economic and health outcomes** will be important in assessing policies and investment going forwards
- A need for **long-term linking with human capital**, with better communication of the benefits to ensure political & consumer buy-in, increased policy intervention and align incentives & investments
- **Learning lessons from COVID-19** - to support a managed, just transition for those who are displaced from fossil fuel industries going forwards