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**Hot or Cool**

# Care Work as a System: Workshop Report

The Hot or Cool Institute is a public interest think tank working at the intersection of society and sustainability.

Our mission is to challenge the status quo, help society reimagine what is possible and enable systemic change towards resilient societies that thrive within ecological limits.

# Care Work as a System: Workshop Report

## Introduction

This report summarises the outcomes of the Workshop *Making Care Work Work* which was held in July 2025. The participatory stakeholder workshop, grounded in systems thinking methodologies, set about to explore two potential societal changes:

- i) increasing staffing in formal care sector.
- ii) reduction in and (gender) balancing of working hours.

The thesis put forward in the workshop is that these two societal changes would lead to better wellbeing, gender and sustainability outcomes

17 stakeholders from academia, civil society and trade unions were brought together, with areas of expertise including gender equality, labour, wellbeing and sustainability. The goals of the workshop were to:

- Understand and bring together alternative visions of a caring economy
- Collectively identify pathways, feedback loops and side-effects relevant to the two societal changes.
- Identify leverage points for change and potential policy interventions.
- Inform outreach, communication and advocacy strategy for the societal changes.
- Provide an opportunity for those interested in environmental issues and those interested in care to come together and identify common ground, identifying allies and advocacy partners.

The workshop applied a systems thinking lens to our understandings of formal and informal care work. The central outputs were two co-designed causal loop diagrams (CLD) which mapped the potential outcomes (in terms of wellbeing, gender and sustainability) of two societal changes 1) increasing formal care work 2) working time reductions that facilitate the increase in informal care work. These CLDs will be used to inform our modelling work to assess the impacts of the two societal changes on our proposed outcome areas.

In the second part of the workshop, these CLDs were used as a basis for developing and testing different policy interventions that could lead to these two societal shifts in formal and informal care work to generate wider wellbeing, gender and sustainability.

The final part of the workshop involved a session on advocacy and movement building.

This short report is structured as follows:

1. Introduction to systems thinking and why it is relevant for this issue
2. Presentation of the co-produced causal loop diagrams
3. Other learnings and implications for analysis, including stakeholder mapping

## Systems thinking

### The limits to linear thinking

In contemporary Western culture, problems are often approached in a linear analytic fashion. A problem is isolated, direct causes identified, and then policies proposed which ostensibly should have an influence on those causes. For example, low female participation in tech sectors might be seen as a problem, lower female enrolment rates in STEM courses may be identified as a cause, and so there is investment in campaigns encouraging young women to study STEM subjects at university. Often this process is based on quantitative analysis, typically econometrics, which is based on existing data, comparisons between geopolitical entities or analyses of trends over time.

This approach can be very effective and has been put to good use in many contexts. However, it does have limits.

Firstly, **analysis based on historical data cannot always tell us about the results of situations or policies that do not yet exist** anywhere. For example, one can compare wellbeing and environmental outcomes between the Netherlands (which has an average working week of 27 hours) and Albania (40 hours). Using such data, one can estimate a mathematical relationship between average working hours and, for example, CO<sub>2</sub> emissions. But caution should be applied when extrapolating this relationship to predict CO<sub>2</sub> emissions if we were able to reduce working time to 20 hours a week (a situation for which we currently have no data).

Secondly, a focus on historical data and trends **tends to make analysts more reactive**. They tend to focus energy on addressing and ameliorating the symptoms of a problem, and do not pay attention to the structural drivers and root causes driving the problem. Over time, these surface level fixes reduce motivation for deeper, structural change, allowing the root problem to worsen.

Thirdly, this approach **ignores the potential side-effects of policies and downstream effects of transformations**, which can potentially either neutralise or accelerate the intended change. For example, for a long-time transport planners believed that congestion could be reduced simply by increasing road capacity. However, whilst wider/more roads may reduce congestion in the short-term, it contributes to the convenience of driving, often reduces space or the attractiveness of active transport (for example by increasing air pollution), and incentivises urban sprawl, thus making travel distances longer and the need for motorised private vehicles greater. Over time, the demand induced by increasing road infrastructure catches up with capacity and congestion levels are back where they started.

Perhaps most fundamentally, the **analytic approach attempts to isolate specific problems, rather than consider the system as a whole**. It can solve one problem but lead to others. Decarbonising energy systems might reduce our CO<sub>2</sub> emissions, but is causing other problems, including the impacts of mining for critical minerals, or increasing land use required for biofuels, thus competing with food production, and biodiversity concerns. In this example, it is not specifically CO<sub>2</sub> emissions that are the problem, but our energy-intensive lifestyles more generally (Hot or Cool Institute, 2025). But, as noted by the OECD, these lifestyles are products of the systems that they are embedded in (OECD, 2021). As such, tackling those lifestyles, and therefore addressing the multiple environmental impacts associated with them, requires a rethink of these systems.

### Introduction to systems thinking

Systems thinking as a concept was developed in the 1930s and 1940s, but was popularised – particularly in the environmental sciences - by the work of Donella Meadows. There are many tenets and tools of systems thinking, but for this report, the most important are as follows.

Firstly, systems thinking recognises that **the observable events and patterns that often drive policy are just the tip of the iceberg** (see Figure A). Determining these events and patterns are structures and mental models that are not so easily definable but are key to understanding the system. If policies are to lead to transformative outcomes, it is at this level that they need to work, and not simply at the level of specific events or patterns. This is often framed in terms of 'leverage points', with high leverage points being at the bottom of the iceberg.

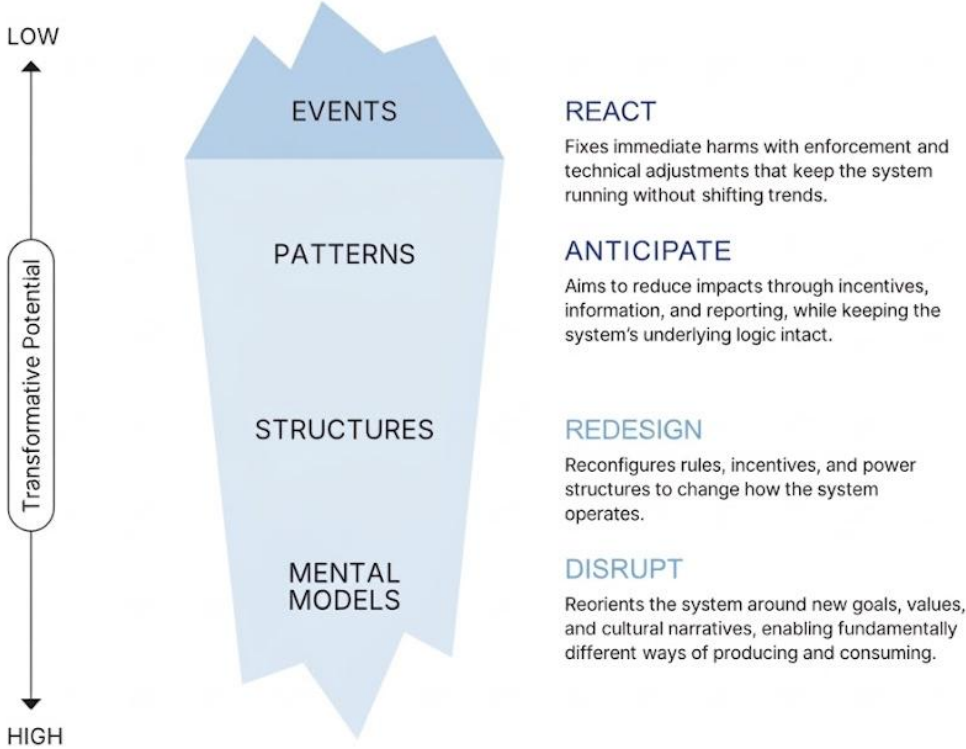


Figure A - Iceberg model of systems

In doing so systems thinking encourages actors who seek to make change to consider the system as a whole rather than a set of parts (OECD & UN Habitat, 2025).

The most important systems thinking tool for this report, is the **causal loop diagram (CLD)**. CLDs are a way to map out the connections between different elements of a system. Elements, labelled in terms of quantifiable phenomena, are connected through causal relationships. For example, high pay in a particular occupational sector should *cause* greater supply of labour in the sector as more people choose to work in it. The phenomena may be easy to measure, like in this example, or they could be less tangible. For example let's imagine the occupation sector in question is waste collector. Then the perceived social status of the occupation is also likely to influence the supply of labour, with the lower perceived social status potentially deterring people from looking for work in it.

What distinguishes a CLD from a linear causal mapping, is the second word: 'loop'. In developing a CLD, it is important to go beyond simply considering a bivariate relationship. What causes high/low pay or high/low social status? And what causes that? And what is the downstream impact of having a greater/lower supply of labour in the sector? Ultimately, might the downstream impacts determine some of the upstream factors? For example, when the sector is understaffed, it will be ineffective and develop a negative reputation within society at large. This might lower the social status of the occupation, thus in turn reducing even further the number of people willing to work in it.

This is a reinforcing loop. If it is unchecked – i.e. it dominates any countervailing effect - it can run away and lead to exponential change. In this case the change is negative, the collapse of the waste collection system and overflowing bins. But it can also develop a positive tendency. If the social status of the job increases and it is well-staffed, then its reputation will increase and more people will be willing to work in the sector.

Other loops are balancing loops: an increase in one variable leads to a decrease in another, which stabilises the system. For example, in a market economy, we can expect that there is a balancing loop around pay. As more people are willing to work in the sector, and there is more competition for open positions, one would expect there to be pressure for the pay to stabilise.

Understanding how these feedback loops, reinforcing and balancing interact helps better understand a system in numerous ways, and help understand how to transform it. For example, one can identify the limits of a particular policy intervention, should it simply feed into a balancing loop that counters any intended consequence. One can identify potential for converting vicious circles into virtuous circles. And one can identify ways in which one might want to change the dynamics of a system to completely transform outcomes. For example, what if a national service was introduced, meaning that all citizens had to spend at least 3 months working as waste collectors? This would circumvent traditional labour market rules, introducing new causal pathways.

## Care as a system

**Care work is part of a complex system.** As we will see in the next section, it has multiple outcomes, many of which contribute to feedback loops. It is shaped by many factors, including factors which are at the heart of our societies, including values and ethics, technology and profit motives.

Our proposition is that, to make any transformative change to care outcomes, one has to consider this system as a whole.

## Care systems

We opted to produce two separate seed causal loop diagrammes (CLDs), one for each of the societal changes that we would be considering in the workshop. Although we expected many variables to be present in both diagrammes, we felt that the questions that we would need to address were so complex, that it would make interpretation and discussion easier if the two questions were considered separately. In some ways, one can understand the two diagrammes that we developed as two different perspectives on the same overall system.

In each case, we started with variables that represented the societal change that we hypothesised as having potential benefits. In the case of formal care work, this was operationalised as *the share of paid work that is care work*. In the case of working time reduction and redistribution, we had two variables: *average working hours for males* and

*average working hours for females* (the reasoning behind this will be discussed later in this section).

The background paper we produced to inform the workshop was the key input informing the seed CLDs. This paper focussed on the downstream impacts of the two societal changes, in terms of wellbeing, gender, sustainability and economic outcomes. To go upstream, we used a broader range of inputs, in effect addressing the questions of why a) the proportion of care work is not sufficient for care needs and b) why average working hours are so high despite productivity gains, and why do men work longer hours than women.

We then focussed on attempting to link downstream impacts with upstream predictors, leading to the formation of feedback loops. It became apparent in the model development process that positive feedback loops (where the impacts of a societal change tend to reinforce the factors that support the change) were easier to identify than negative feedback loops (where impacts tend to neutralise further change).

In the workshop, we presented the seed CLDs to participants, using the feedback loops to help elaborate the narrative. Participants were then split into groups to discuss and suggest changes to one of the CLDs. Two groups considered each societal change. What is presented in this section is a revised CLD for each societal change based on these groups' inputs.

## Formal care work

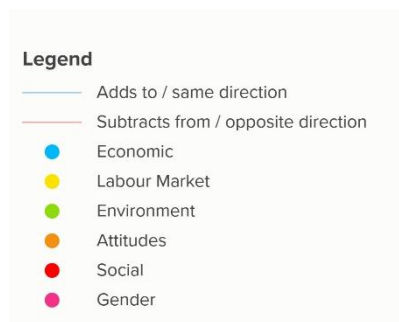


Figure B - Legend for formal care work CLD

1. The **share of paid care work** in society is determined by two key variables: **attractiveness of paid care work** and **government revenue for care sector**. The first of these can be understood as the supply of workers, the second as the principal determinant of the availability of jobs. We make the assumption here that socially valuable care work inherently has limited profitability and therefore that state support is necessary to increase its supply. Workshop participants added a moderating variable here, which is **spending on frontline care work**, rather than to **administration costs** and bureaucracy, or **private sector profit-extraction**.

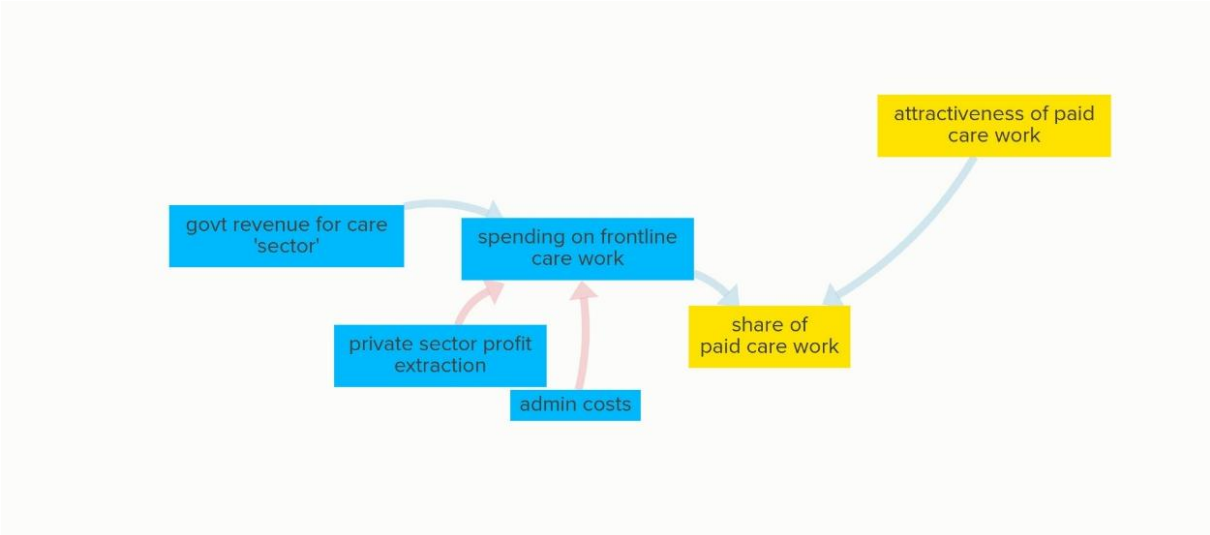


Figure C - Step 1

2. The most important factor determining the attractiveness of care work is **pay (relative to other sectors)**. Here we identify the primary cause for low pay to be the relatively slow **increases in productivity for care work vis-à-vis other sectors** (what has been called Baumol’s disease). However, workshop participants proposed additional factors that contribute to the low pay of care workers, including the lower **status of women** in society (coupled with the fact that care work is often gendered) and – for some sectors – difficulties in **collective bargaining**. It was also suggested that the limited possibilities of working from home in the care sector will add another factor to its unattractiveness as more employees in other sectors move to working from home.

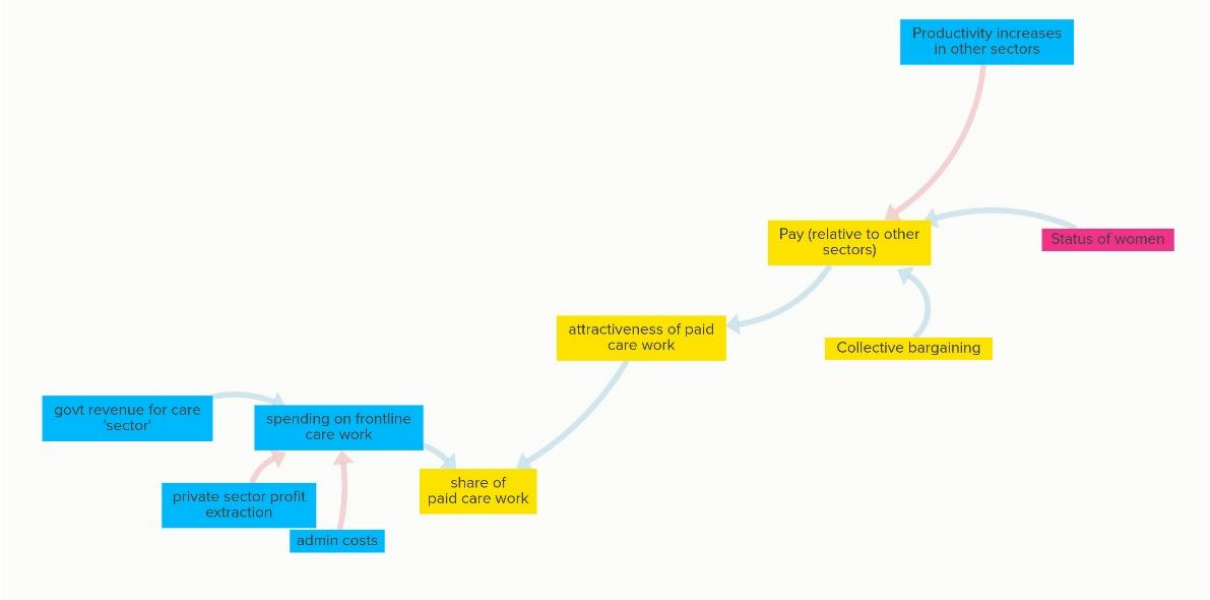


Figure D - Step 2

3. The variable immediately downstream of the share of paid care work is the **staffing gap in the care sector**. Put simply, with a lower share working in paid care work, there will be a larger staffing gap. Of course, demand for paid care work also determines this gap and there are many variables that shape this. One variable which we consider to be exogenous is the **aging population**, which increases the need for care, and therefore the gap. However, this variable is only partly exogenous, as it is only the unhealthy elderly that increase the strain on the care sector. Better preventative care and healthier lifestyles could help ensure that people are able to live without formal care for longer. One could also argue that it is specifically the unhealthy elderly that are *not cared for by family members* - this is a link between this system and the system related to informal care discussed in the following section. Furthermore, this focuses on care for the elderly and ill. At the other end of the life course, an aging population potentially means less need for childcare and education. It could also potentially mean more opportunities for grandparents to take on childcare responsibilities, reducing formal care needs. Participants also highlighted a demographic variable that can reduce the staffing gap in the care sector, namely **immigration**.

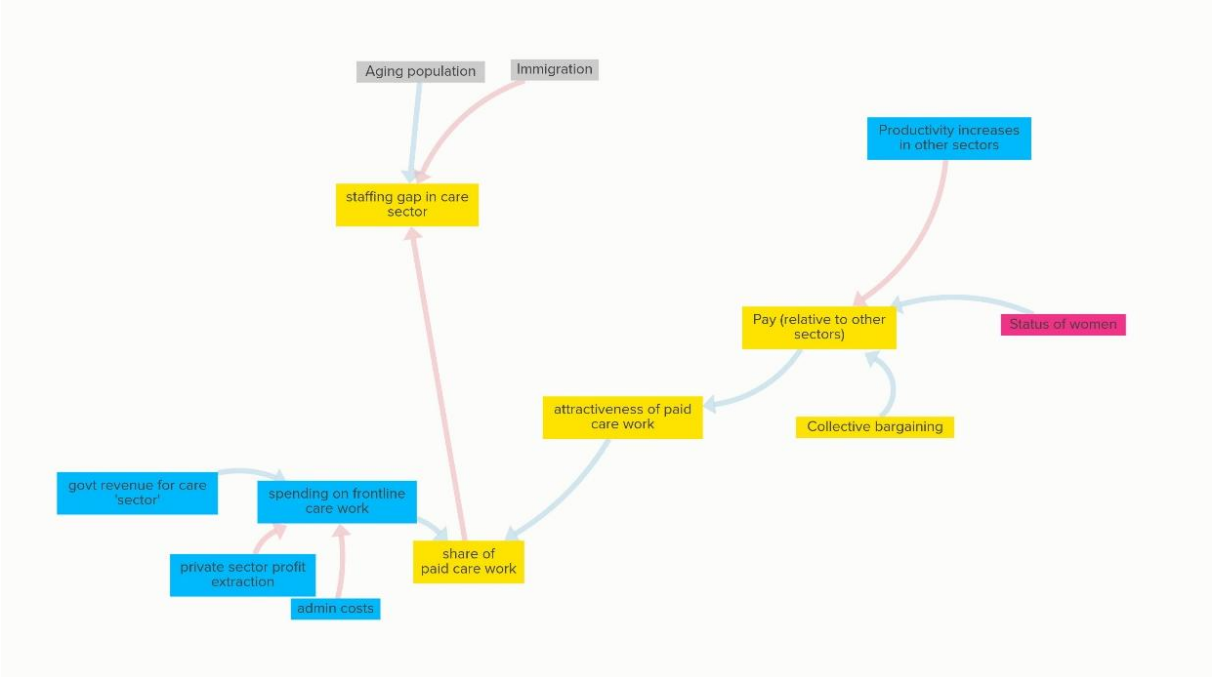


Figure E - Step 3

4. Another factor which determines the staffing gap in the care sector is the **effectiveness of care workers**. This brings us to our first feedback loop, in this case a reinforcing loop, which we call the burnout trap. The staffing gap in the care sector leads to poorer **working conditions in the sector** which leads to reduced effectiveness of care workers which in turn reduces the staffing gap further.

5. A further reinforcing loop flows from the **working conditions in care sector** to the **attractiveness of the care sector**, meaning that fewer people wish to work in the sector.



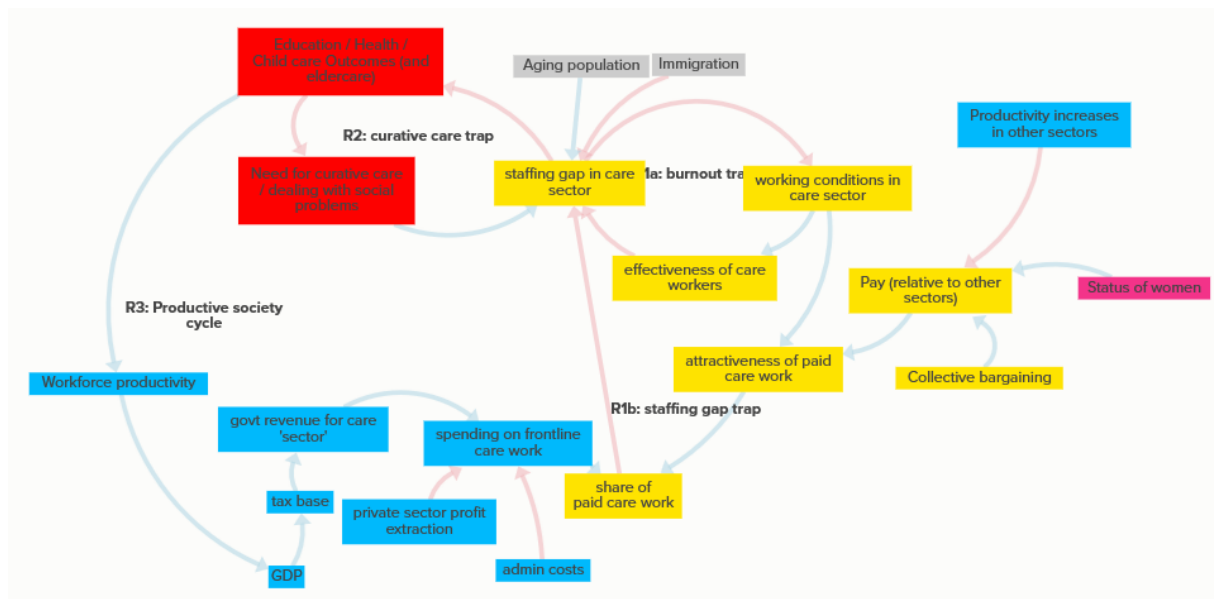


Figure G - Steps 6-7

8. A further reinforcing feedback loop from positive **health, education and childcare outcomes** is the political loop. In this case, we hypothesise that poor outcomes lead to less **pro-social values**, which decreases **public support for government spending**, including on care. We also hypothesise that these less pro-social values reduce the **attractiveness of care sector** which also affects the supply of possible care workers. Lastly, related to this, we hypothesise that a lower **share of people working in care work** would decrease **public support for government spending on care**.
9. We hypothesise that gender norms also play a role in this system. We have already mentioned the hypothesis that gender norms contribute to the low pay of the care sector. We also expect that strong **gendered norms about care work** reduce **male participation in the sector**, which reduces the overall workforce available.

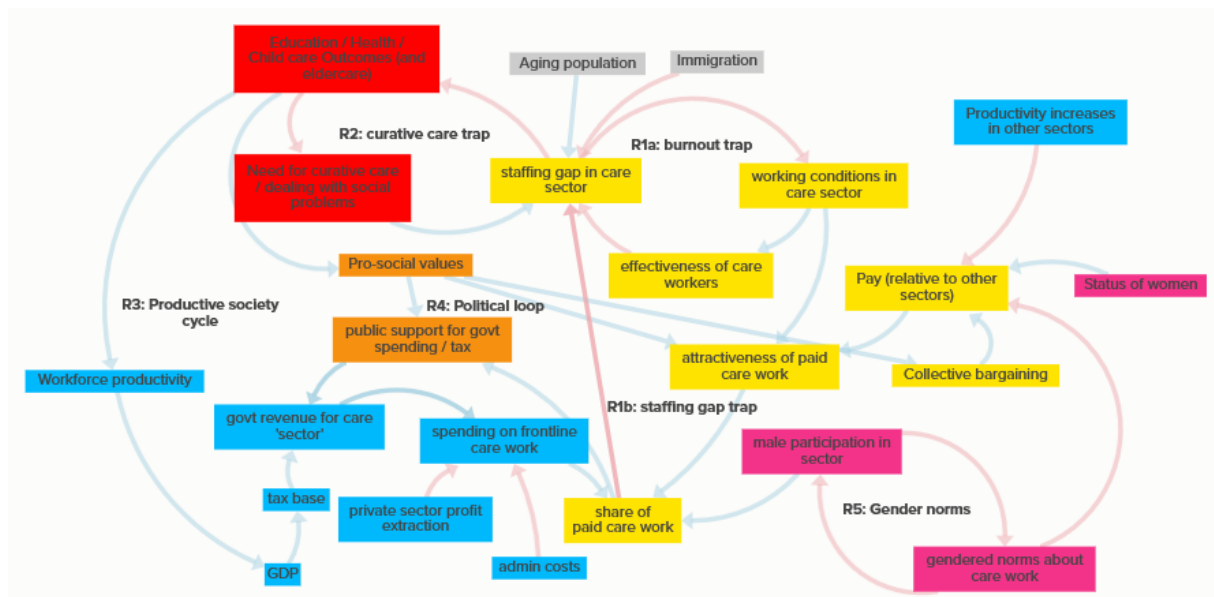


Figure H - Steps 8-9

10. All the feedback loops highlighted to this point are reinforcing loops. One balancing loop can be found relating the **share of care work** to **GDP**. Effectively, we expect that an increase in the share of people in paid care work would mean less people working in more 'productive' sectors and therefore a decrease in GDP. This would reduce the **tax base**, which would reduce **government revenue for care**, which would reduce the **share of care work**. We are not at this stage able to calculate whether this balancing loop would dominate the *reinforcing* loop going through GDP mentioned in point 7, or indeed all the other reinforcing loops.
11. Last but not least, we wished to hypothesise the effects of this societal change on CO2 emissions. We hypothesise two effects. Firstly, a direct effect of increasing the **share of care work** vis-à-vis other paid work would be a reduction in **territorial or production-based emissions**, given the lower carbon intensity of care work. Secondly, the reduction in **GDP** would lead to a reduction in **consumption**-capacity of citizens, which should lead to a reduction in **total emissions**.

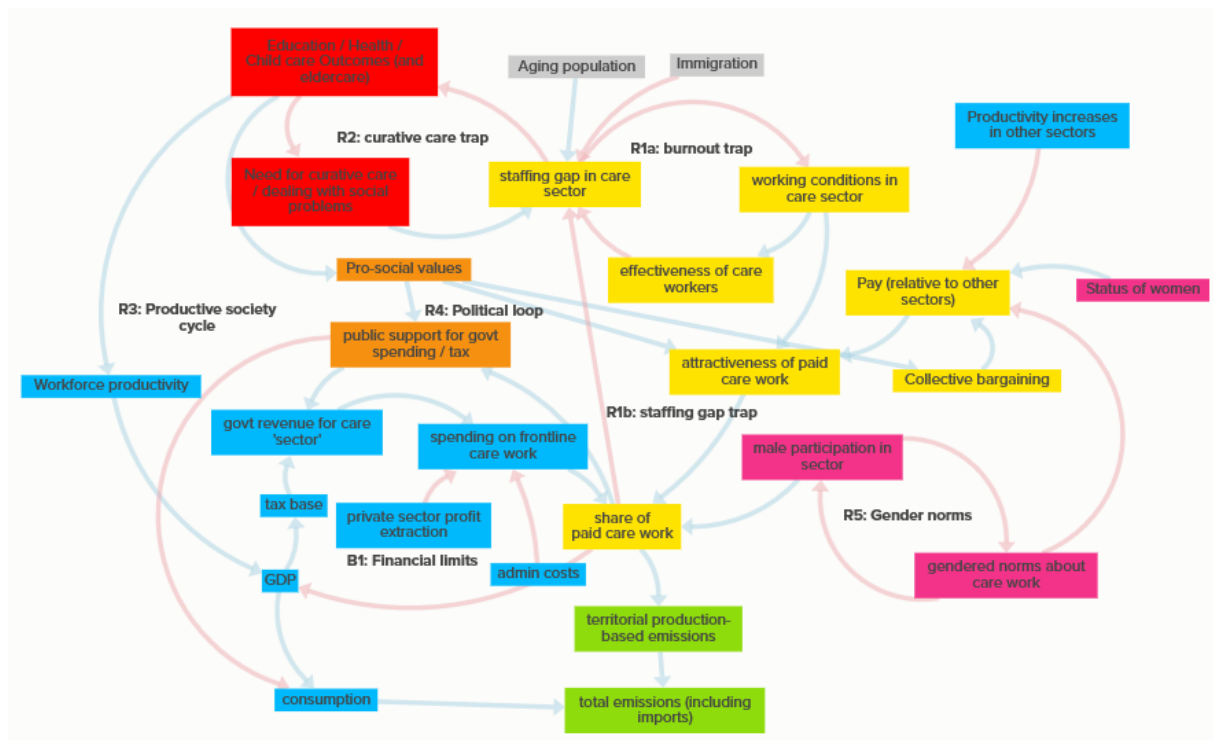


Figure 1 - All Steps

12. A further point made by workshop participants is that curative healthcare is more carbon intensive than preventative healthcare. Therefore, the curative care loop should also influence overall emissions.
13. A question was raised as to whether it would make sense to add a link from CO2 emissions to increased need for care, given the increased risks of natural disasters associated with climate change.

## Summary

What does all this mean for the idea of increasing the share of paid work that is care work?

Firstly, it highlights the fundamental challenge inherent in formal care work which is that **productivity increases cannot keep up with other sectors, and therefore that pay can only increase through state support.**

But it also highlights the **multiple reinforcing feedback loops which could become virtuous cycles** if there was a relatively small shift in the system. These include i) more effective care staff as they are released from the burnout trap; ii) a more appealing care sector attracting more staff, iii) escaping the curative care trap by investing more in preventative care, iv) greater workforce productivity and v) potentially an increase in pro-social values.

These feedback loops may mean that improvements in outcomes may be non-linear. In any case the system outlined suggests improvements in wellbeing (both for givers and receivers of care) and gender equality and reductions in emissions are all possible.

There are two critical risks which the workshop highlighted. Firstly – **a more care-based**

**economy will lead to a lower GDP**, which means – all else being equal - less government revenue available for care work. This is particularly relevant given that on-going productivity increases in other sectors – particularly due to AI – will mean that care work will require ever greater subsidy. It is a question whether this decrease in GDP would be offset by increased workforce productivity thanks to the productive society cycle. As such, it may be that public attitudes would need to change to endorse, or indeed push for, a greater share of GDP to be assigned to care work.

Secondly, workshop participants highlighted the risk that, in many countries, **increased state investment in care would be captured by bureaucracy and private interests**. They highlighted the need for more fundamental changes in the economic system to avoid this possibility.

### Working time reduction and informal care

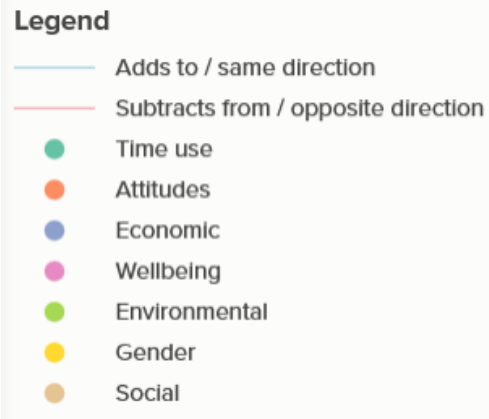


Figure J - Legend for working time reduction and informal care CLDs

1. The key variable in this model is average **overall working hours**, although we acknowledge that the relationship between working hours and many outcomes is non-linear and averages mask important questions of distribution. As with the previous model, we identify two key upstream variables shaping working hours – a demand variable and a supply variable. The supply variables refer to the possibility of working shorter hours in terms of **working hour norms** and the **dominance of jobs with longer hours**. The demand variable reflects people’s willingness to work longer/shorter hours, which we link specifically to their **(perceived) need for income**. The higher the (perceived) need for income, the more people want to work longer hours. Where the (perceived) need for income falls, people are more likely to be willing to work shorter hours. The word ‘perceived’ is in parentheses because this variable captures both the genuine need for income (in terms of costs of living and the need for savings), and manufactured needs that are generated through materialistic norms and advertising. Note that the actual need for income is probably more relevant for people on lower incomes, whilst the perceived need is more important for people on higher incomes.

- At this point a first feedback loop can already be identified – average working hours influence working hour norms and job availability. This highlights the very societally defined nature of work – one of the key factors that determines how many hours someone works, is how many hours *other* people work.
- It became apparent early on that it was important to distinguish between **working hours for males** and **working hours for females**.<sup>1</sup> We make the assumption however, that the two upstream variables mentioned earlier (i.e. (perceived) need for income and availability of jobs with shorter/longer hours) influence both genders, and therefore that the overall working hours influence both genders, because they are broadly working in the same job market.

We then model strict mathematical relationships which acknowledge the finite amount of time people have. In that time people can either a) do paid work, b) do **unpaid care work** or c) have **free time** (including sleep). We make the assumption that it is the amount of time that people work (or feel they have to work) which is the decisive variable here. People then allocate the rest of their time between care work and free time as they wish or are able to. This is based on the assumption that people’s working duties are more fixed than their care duties, which is the case for most people who have contracts with defined hours. Of course, over the long term, people (particularly women) may choose to adopt jobs with shorter working hours so that they can meet their care priorities (see step 4).

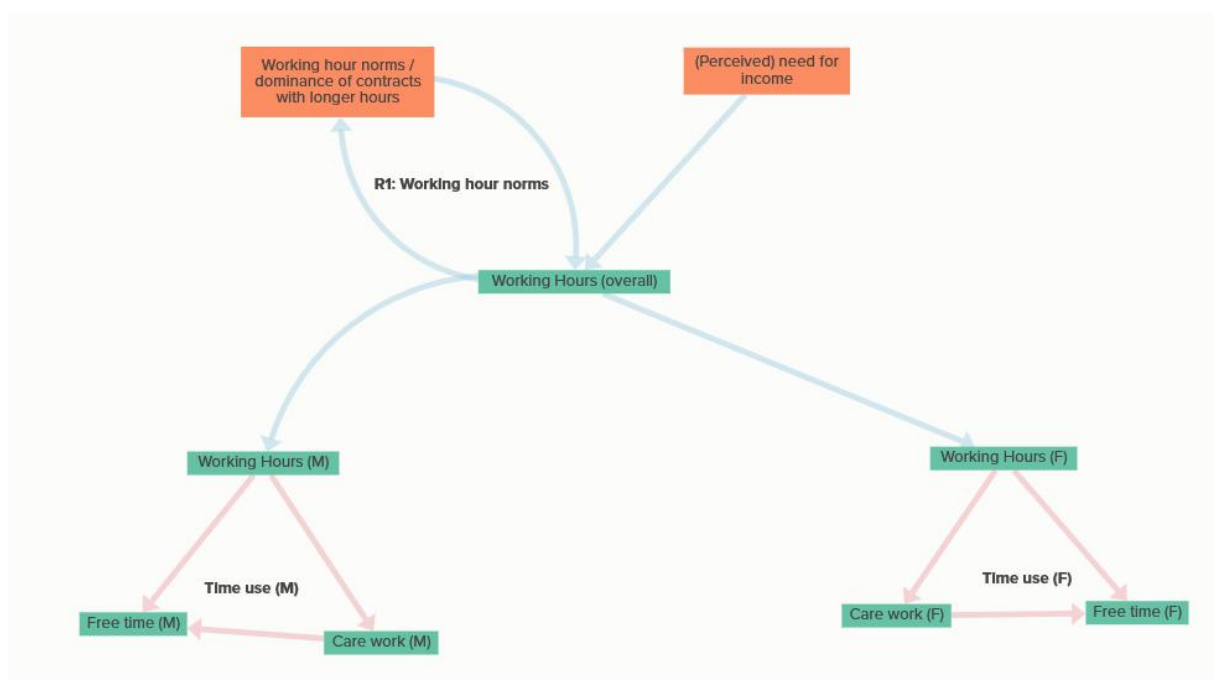


Figure K - Steps 1-3

<sup>1</sup> We acknowledge that, in this case, we are neglecting the analysis of people who do are non-binary or gender diverse. Models are always a simplification of reality, and in this case we justify this simplification by noting that only 0.2% of the population in Europe fit this category.

4. We assume that **gendered norms about unpaid care work** play an important role in determining how many **females'** (paid) **working hours**. This assumption is particularly relevant when it comes to people living in heterosexual couples, as it is this norm that tends to drive women to reduce their working hours so as to take on domestic care responsibilities. However, it is also relevant for women who don't live in heterosexual couples, as they are still subject to gendered expectations in terms of both childcare and elderly care.

It is worth noting that we assume it is gendered norms about unpaid care work that are important in modern societies, not gendered norms about *paid* work. In more traditional societies, it may be the case that females do not work or work shorter hours, because it is not seen as 'appropriate' for women to be at work. However, we think that such norms are no longer dominant in the West. There is no stigma against women working, but what still holds is an expectation that they also are responsible for care at home.

We also suggested in our original CLD that gendered norms about unpaid care work contribute to **men's** high **working hours** (i.e., because men are not expected to contribute as much time to care work, they work longer hours). However, in this case it may well be more about expectations or norms about career progression that stop men reducing working hours.

5. The next feedback loop relates to these gender norms. In particular we hypothesise that, as **women's working hours** go up, **women's careers** will **advance** and therefore those **norms** would be lessened. But note this is relative – it is the number of hours women work *relative* to men that is decisive. If everyone ended up working longer hours, this would not help advance women's careers. Meanwhile, it is worth noting, that there are plenty of interactions across the genders, for example in terms of the amount of **care work** by one gender influencing the **care work** done by the other.

A further factor introduced by participants is the notion of **community care work**, i.e. care provided from outside the household, but not by private or governmental institutions (for example 'toddler groups'). This can potentially reduce the amount of within-household care work needed, thereby allowing more free time. Participants suggested that community care work is made more feasible in contexts where people are **working shorter paid hours**, and where **inequality** is lower (because this leads to lower **social fragmentation**).

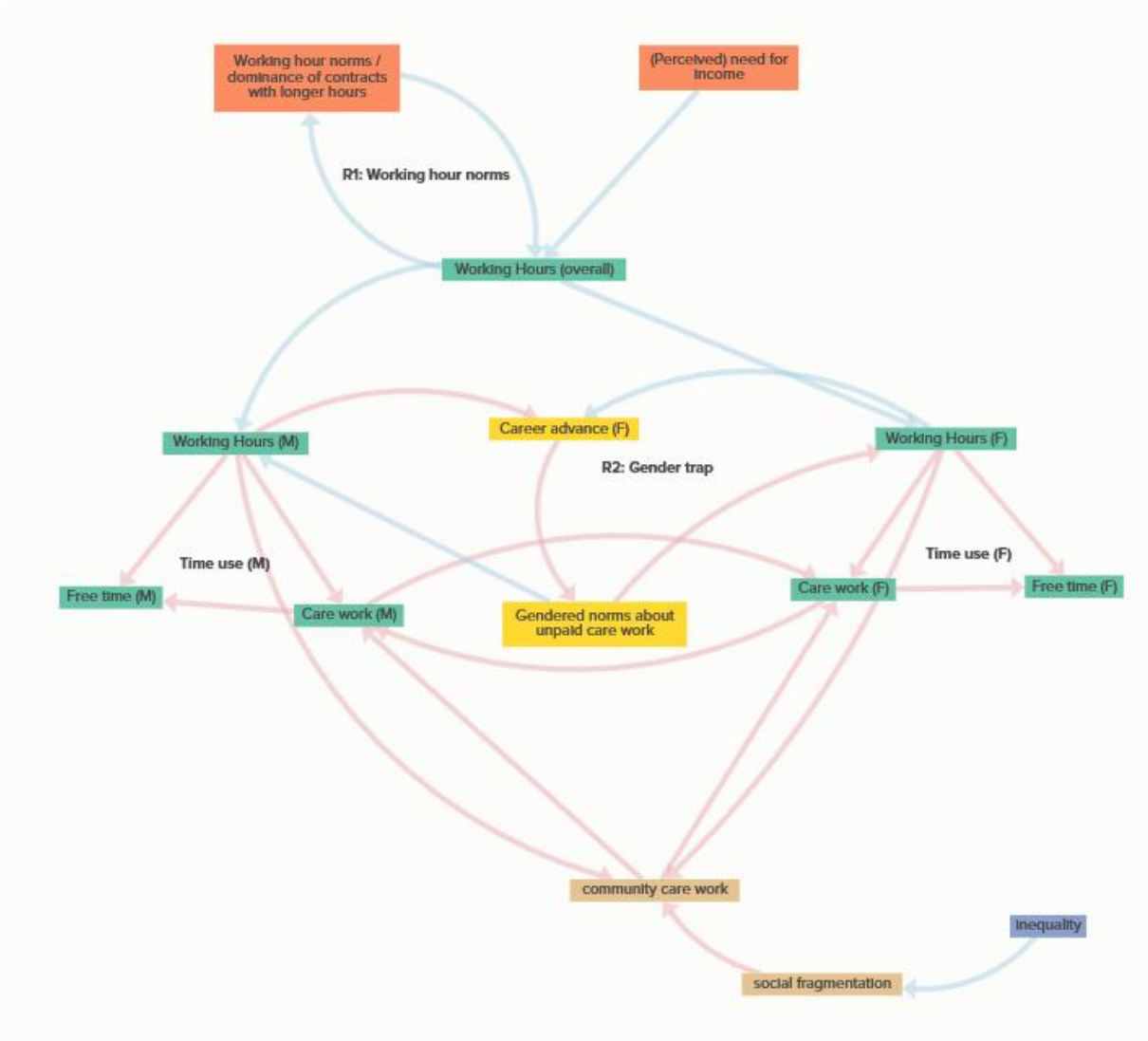


Figure L - Steps 4-5

6. The number of **hours worked** (both in terms of paid work and unpaid care work) by females and males all combine to a new variable – **overburdened by work/care**, which predicts **stress**. This is a particular example of a non-linear variable. We do not anticipate that an increase in total work and care hours from, for example, 25-30 hours a week, would have any effect on stress. It is when people’s combined hours are very high that this becomes a problem.
7. Stress is the first step along a very complex feedback loop, which we call the overworked employees trap (although theoretically it could also apply to people who are purely in care work). Effectively, the higher levels of **stress** there are in society, the worse **health outcomes** there are. But also **childcare outcomes**, as overburdened parents are likely to transmit their stress to their children. These poorer outcomes lead to higher public **health/childcare costs**, which leads to worse **public services**, which increases the need for people to rely on private services, increasing **basic costs of living**, which increases their **need for income**. Which, as we have seen, means they seek longer **working hours** (thus taking us

back to step 1). This can be seen in the extreme in the USA, where public healthcare is so limited, that most people feel it is necessary to rely on costly private healthcare.

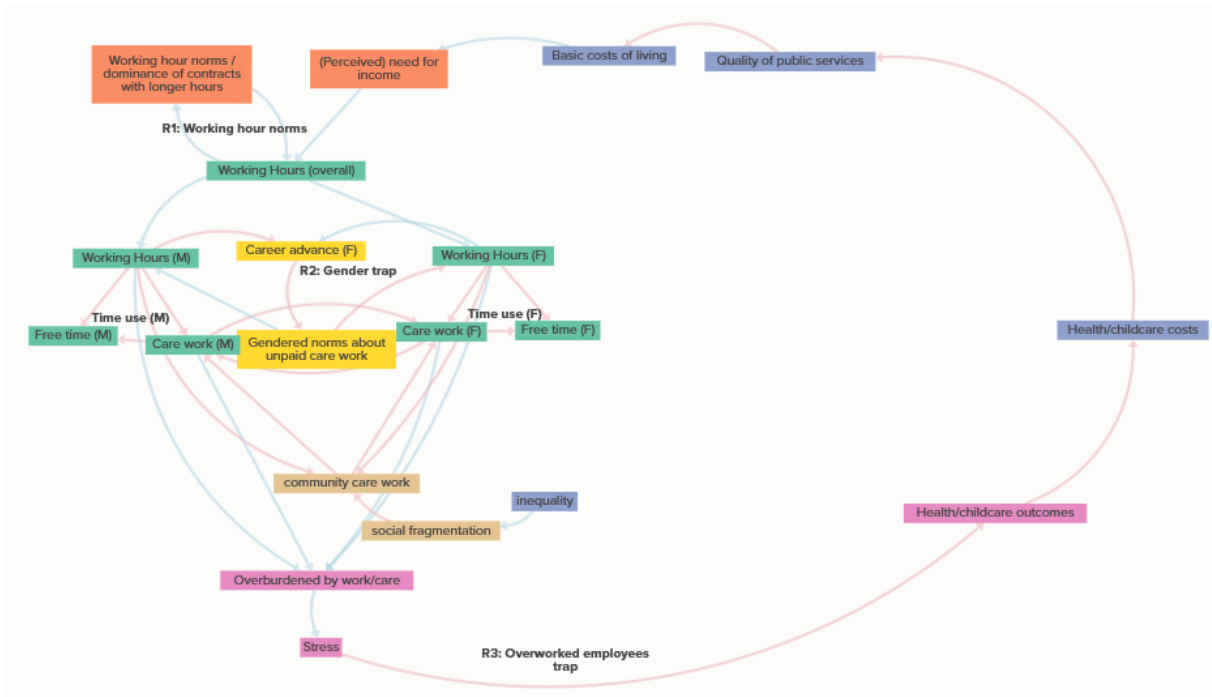


Figure M - Steps 6-7

8. A secondary effect of the higher **health/childcare costs** is greater **financial stress** for people who are struggling to meet those costs, which again leads to greater overall **stress**. It's a vicious circle, which reflects a failing public services system. We call it the 'wealth of public services' loop, to highlight the positive counterpart, whereby low levels of stress lead to better health and childcare outcomes, lower health and childcare costs and therefore more effective public services.
9. Participants also highlighted another reinforcing feedback loop, in that better public services mean that more **care work** can be delivered by the **state**, reducing the strain on people (particularly women) to deliver unpaid care. This highlights the links between this CLD and the one on formal care work.

## Care Work as a System: Workshop Report

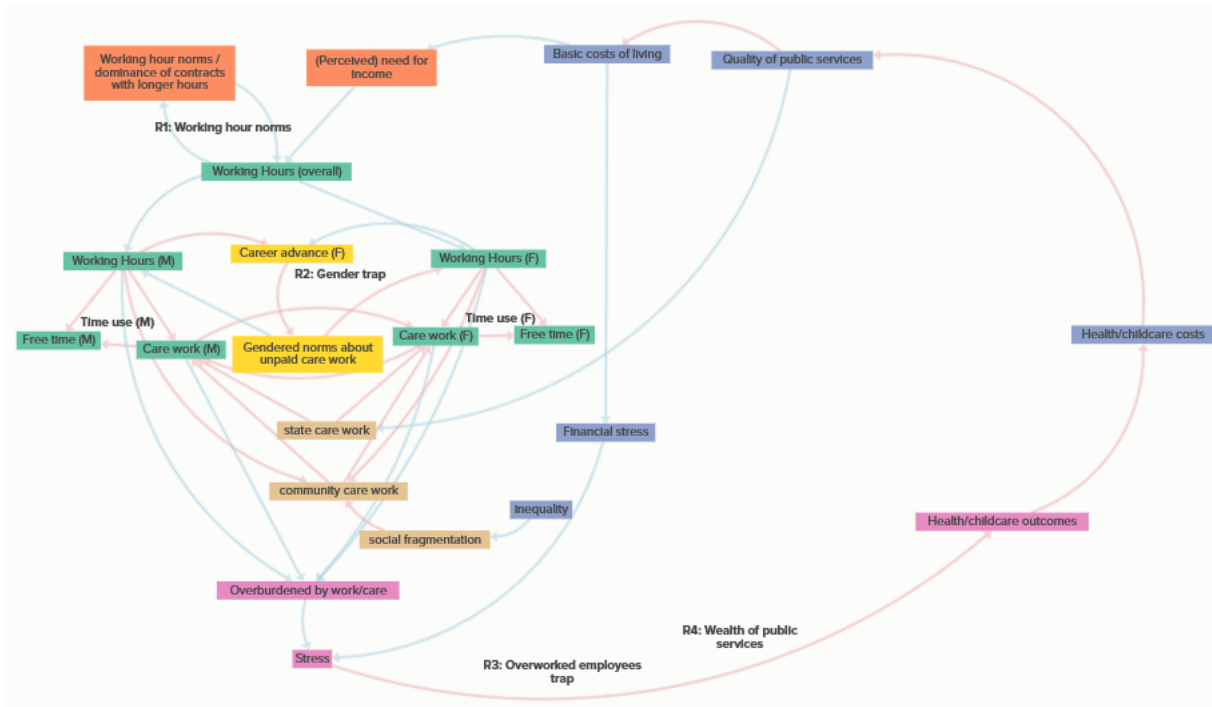


Figure N - Steps 8-9

- Another, perhaps more tentative feedback loop stretches from **stress** to more psychological variables. Research suggests that stress leads to lower levels of **eudaimonia** which leads to greater levels of **materialism**. This materialism in turn increases the **perceived need for income** which leads to **working longer hours**. In that sense, overworking is a vicious circle at the individual level: individuals who work longer hours, become more stressed and more materialistic and therefore seek to compensate for this low wellbeing by working more. Having said that, one can understand materialism as a societal value, and not just an individual one. In other words, society's narratives about the good life contribute to the high perceived need for income.

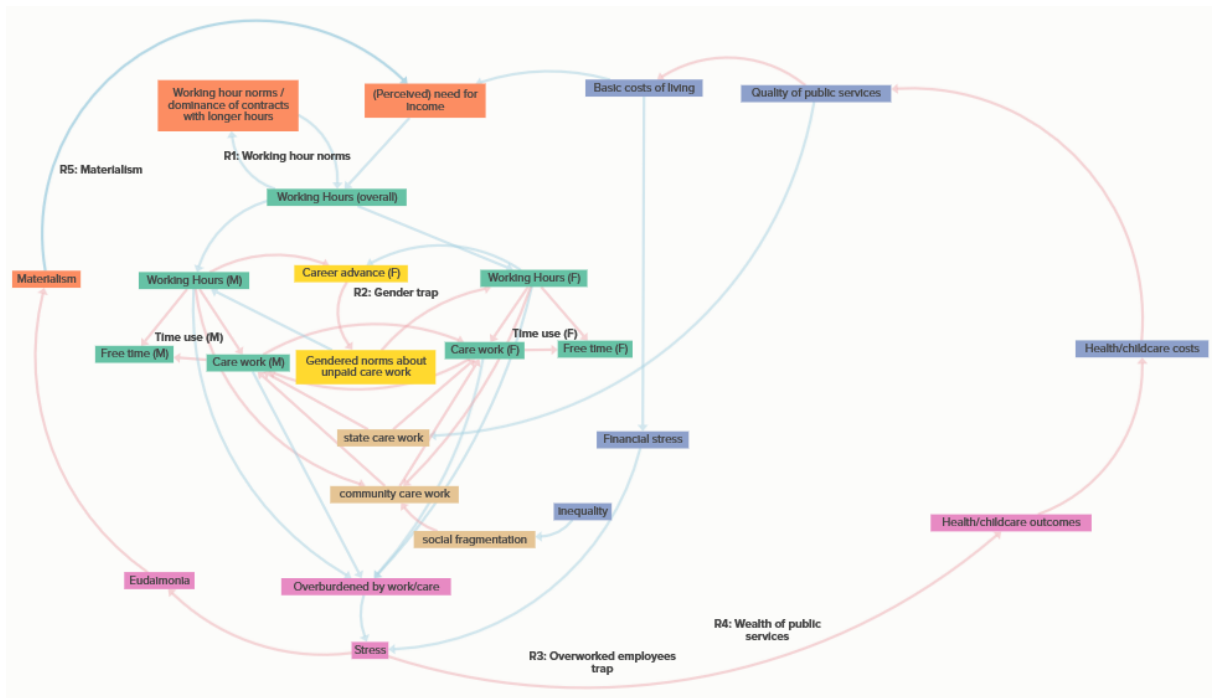


Figure O - Step 10

11. So far, we have not touched on more economic factors in this system. This is where we find our first balancing loop. Unless productivity increases entirely compensate, reduction in **working hours** would lead to reduced **economic production** and reduced worker **income**. Both these effects will reduce the **tax base** which, as we saw in the previous model, is likely to reduce the **quality of public services** and therefore increase the need for individuals to cover those costs themselves. However, this is again probably a non-linear relationship, and we anticipate that, at least for some countries, a reduction in the tax base would not necessarily lead to a wholesale decline in public services.
12. A positive side-effect of the reduction in economic production that was posited by workshop participants, was a reduction in **wealth accumulation** and therefore **elite power**. We did not explore how these outcomes might feed back into the overall system, but it is possible that reduced elite power could lead to reduced pressure on workers, greater support for public services and less materialism.
13. Reduced individual **income** will also, at the extreme, increase **financial stress** creating another balancing loop which we call the 'minimum income' loop. However, as participants highlighted, this negative effect could be counteracted if there was a decrease in **inequality**, which was a variable that they added to the diagram. Indeed for many participants, this was a prerequisite for working time reduction.

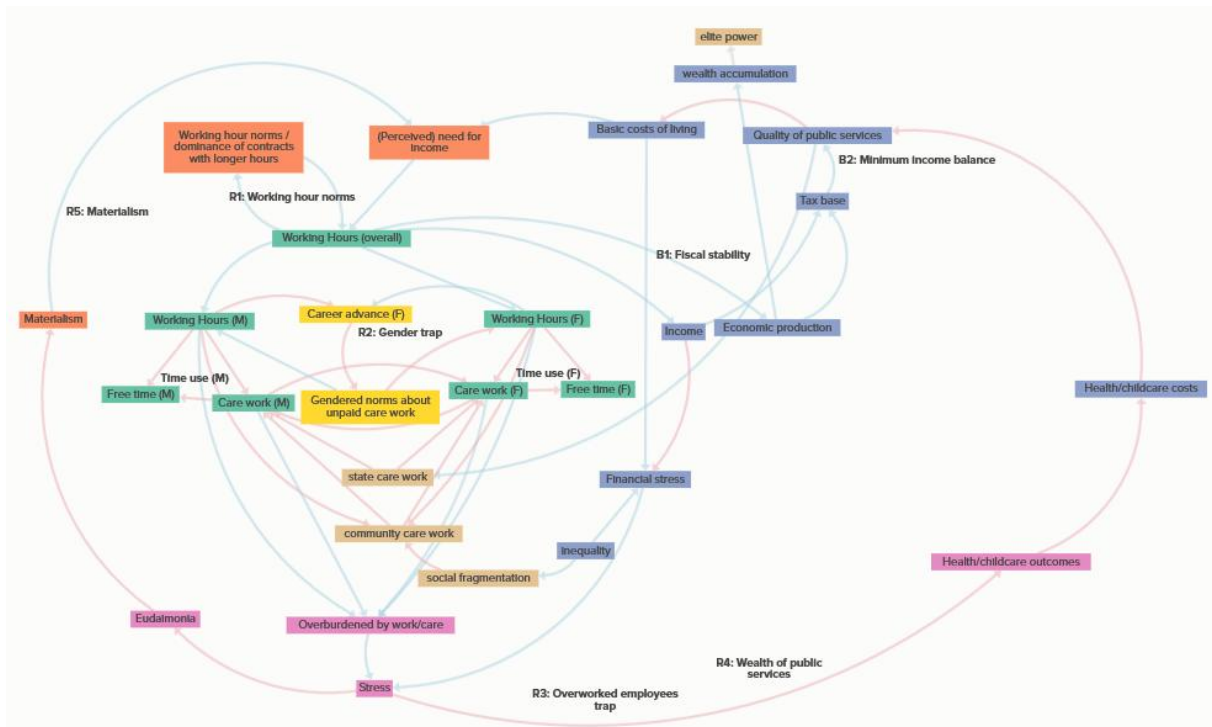


Figure P - Steps 11-13

14. We identify four ways in which we believe this system determines CO2 emissions. Firstly, a reduction in **economic production** would lead to a reduction in territorial **emissions**.
15. Secondly, a decline in individual **incomes** would reduce **overconsumption** and therefore ensure that the decline in territorial **emissions** is not entirely negated by increasing exports. In other words, not only would production-based emissions fall, but also consumption-based emissions. A third factor, also mediated by consumption, is materialism. If reduced **stress** leads to less **materialism**, then this will also contribute to reducing **overconsumption**.
16. Finally, we hypothesise that having more **free time**, will also mean that people have more **time for sustainable choices** (for example slower modes of transport, repairing goods, or more home-cooking). This could also reduce **emissions**, although the magnitude of this effect has not been estimated. Furthermore, workshop participants highlighted that this pathway is likely to be most effective when there is **infrastructure** to support sustainable lifestyles (e.g. community gardens allowing people to grow their own produce) and **information** on how to do so. **Pro-social values** were also brought in here (mirroring the other CLD), enhancing eco-social **infrastructure** and leading to greater support for public services.

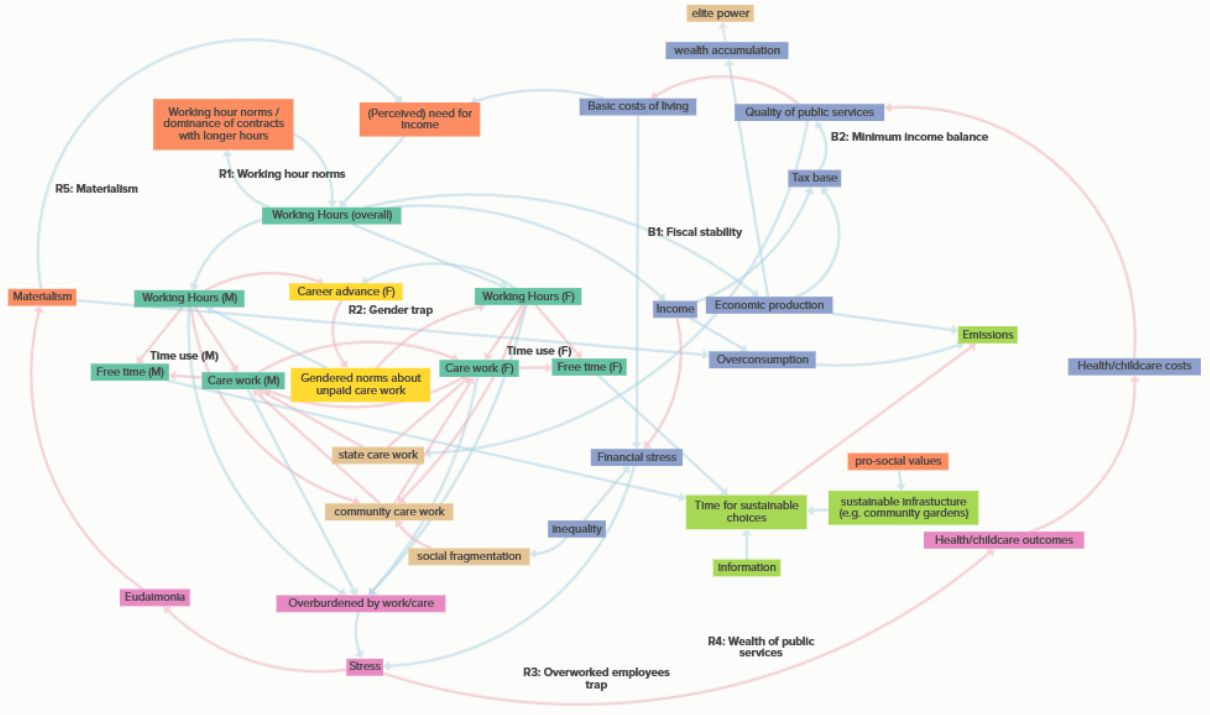


Figure Q - All steps

Summary

Going over this CLD, perhaps **the biggest challenge to reducing working hours overall is reducing the actual need for income, particularly for those on lower incomes.** It highlights the non-linearity of this system. Thinking more about the distribution of working hours, perhaps the hardest challenge is to **address gendered norms about care work,** which one can argue are still strong even amongst people who consider themselves progressive or feminist. The image of the man as breadwinner, and the sense that a man’s success is defined by their career are the flipside of this challenge.

There are multiple virtuous circles, however, which could stabilise a reduction and redistribution in working hours, including changes in norms, healthy public services, and reductions in materialism.

In terms of outcomes, there are at least **four pathways through which reduced working time could reduce CO2 emissions.** Whilst some of these pathways may be more important than others in the short term, this suggests that a focus on any one pathway may underestimate the potential benefits. Other outcomes are a little less certain. For example, reducing work and care pressure might reduce stress, but financial difficulties can increase it. This suggests that the wellbeing benefits of working shorter hours may be clearer for those on higher incomes, where financial stress is likely to counterbalance the benefits.

Lastly, it is clear that there is no direct link between reducing overall working hours and improving gender equality in terms of working hours. Different mechanisms and policies will be needed to ensure that it is men that reduce working hours more, and also that it is men

who increase the amount of time they spend on unpaid care work.

Aside from this, the biggest risk the CLD highlights is the economic balancing loop. In effect, reductions in working hours may reduce incomes too much and may reduce the fiscal capacity for governments to maintain strong public services. The differential effects, combined with improvements in health and childcare outcomes would need to be assessed.

### Process

Several participants noted that the workshop was the first time they had explored the care sector using systems thinking methodologies. This in itself had substantial value, and we found the methodology helped 'spell out interdependences', as one participant described it. This appears to be particularly important given the complicated interlinkages between care work, wellbeing, the economy and environmental impacts.

The development of causal loop diagrams also helped identify leverage points and highlighted that "some [changes] have far more transformative potential than others" (Professor Naila Kabeer).

### Other learnings

Of course the workshop did not focus exclusively on causal loop diagrams. Several other conversations are worth highlighting.

### Definitions

We framed one of our proposals as "increasing staffing in formal care sector". However, conversations made it clear that what we actually want is "increasing formal care *work*", not the sector as a whole. This was made particularly clear when discussing the bureaucratisation of care sectors, whereby an increasing proportion of resources available for health, care and education go to management and administration, rather than frontline work. Whilst management and administration are no doubt necessary to some extent, it is the frontline work which makes a difference to people's lives.

One participant urged us to include environmental NGOs as part of our definition of formal care work. Although we believe that conceptually this makes sense, for our analysis we will focus on more 'traditional' care sectors (i.e. health, education, childcare, elder care, personal care). This is to avoid appearing tautological in our arguments on the relationship between care work and environmental benefits. It is not particularly newsworthy to make the argument that environmental NGOs have a positive impact on the environment. It is more interesting to highlight that growing the education and healthcare sectors have a positive impact on it.

The workshop also highlighted the range of terms related to the care economy, for example the home economy (activities done at home as opposed to by external actors) and the

foundational economy (which includes care, but also housing, food and transport). Our work will focus on care, but this suggests potential extensions or analogous research.

### Heterogeneity in ambitions

Our proposals highlighted a direction of change (e.g. working time *reduction*), but not a specific target. The workshop provided an opportunity to address this gap.

However, there was no consensus on targets. With regard to the share of formal care work, participants gave answers between 35% and 50% of all remunerated work. Although this is much higher than current levels (in Europe between 5% and 8%<sup>2</sup>), participants all agreed that more is not necessarily better. This is partly because of economic considerations – for example the need to maintain a workforce in more productive sectors. But it also highlighted that participants did not want to fetishise care work. They stressed that care work is not a good *for its own sake*, but rather because it addresses needs and can improve lives. In a society with better health, or where fewer children end up in need of foster care, there would ultimately be *less* need for care. Furthermore, there was a sentiment that we don't want to over-marketise care. Some care can and should take place domestically, or through community networks.

Similarly, working time reduction was not framed as an end in itself, but a means. One participant stressed that we shouldn't problematise paid work. It is also valuable and (can) bring meaning to people's lives. Most participants envisioned an ideal state in the medium-term where people work between 20 and 35 hours per week.

However, important caveats were highlighted. For example:

- The way which hours are reduced might have gendered effects. Many organisations have talked about 4-day or even 3-day weeks, but some participants highlighted that *shorter* working days might have more benefits for gender equality, making it more likely for males to take on domestic care responsibilities.
- It was argued that reducing working hours *now* might not be feasible given the huge labour required to decarbonise our economy. However, it was agreed by all that it was a medium-term goal.
- There were questions as to whether all jobs can be done with reduced hours. At the extreme, one wonders what we would think of a Prime Minister or President who only worked 20h a week.
- There is still work to be done to understand the impacts of working time reduction on the Global South, and also the moral implications (given that much of our consumption is dependent on labour in the Global South).

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<sup>2</sup> Calculations using ILO data and the ILO definition of care occupations (based on ISCO-08), including 22. Health Professionals; 23. Teaching Professionals, 32. Health Associate Professionals; and 53. Personal Care Workers.

## One model or two

For this workshop, and for our data analysis, we will consider the two societal changes using separate models. But it was clear at many points that they are interlinked. They are interlinked partly because they are shaped by the same variables, for example GDP and tax base, social values and gender norms. But perhaps more importantly, they interact with one another, with more unpaid care work at home reducing the need for formal care work, and vice versa. At the workshop it was highlighted that unpaid care work represents the lion's share of all care work, and therefore it is shifts in unpaid care work which are likely to be more fundamental.

Ultimately, a full model combining both formal and unpaid care work would be beneficial, but for this to be useful, simplifications would be needed.

## Policy ideas

During the workshop, participants were asked to brainstorm policies that could support the two societal changes under consideration. The table overleaf provides an overview of their ideas.<sup>3</sup> Although we asked participants to identify policies for one of the two societal changes, we found that many of the proposed policies were relevant to *both*, either because they were about care work and/or gender issues in general, or because they were related to underlying systems such as tax and political power. These policies are presented towards the end of the table.

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<sup>3</sup> Policies in grey came from general discussion, rather than this specific activity.

<b>Policy Idea</b>	<b>What does it do?</b>	<b>Who does it affect?</b>	<b>Who is responsible for implementation?</b>	<b>What part of the system does it affect?</b>
<i>Paid care work</i>				
Profit caps on commercial care sector providers	Addresses the privatisation of the care sector and limits the profit seeking logic which leads to corners being cut. If implemented correctly we would expect wages and working conditions for care workers to improve.	Care sector providers Care sector workers	Government	Burnout trap Government revenue for care
Targets for public vs private care provision (as in Ireland)	Addresses the privatisation of the care sector and limits the profit seeking logic which leads to corners being cut. If implemented correctly we would expect wages and working conditions for care workers to improve.	Care sector providers Care sector workers	Government	Burnout trap Government revenue for care
Organise care workers into formal unions (provide resources and training)	Promote collective bargaining as a means to push up wages and working conditions in the care sector, in the long run this would increase the appeal of the care sector and potentially increase male participation	Care workers	Trade Unions Funders	Working conditions in care sector Appeal of care sector Males in paid care work
Rules for minimum staffing requirements in care sector, and fines for non-compliance	Ensure there are enough workers in the care sector. Force care providers to improve working conditions and salaries in order to reach quotas. This would also improve the quality of service provision, which would then bolster public support for care spending.	Care workers	Government	Working condition in the care sector Effectiveness of care workers Staffing gap in care sector Appeal of care sector
Set up high quality family care centres (similar to SureStart UK)	Increase public support for care spending as people can see the direct value, reduced the private household care burden, boosts wellbeing by addressing loneliness and isolation etc	Care workers Households	Government Local Authorities	Public support for government spending Working conditions in care sector Quality of public services

Healthy ageing assessment in government spending	Refocuses budgeting priorities towards preventative care. A healthy ageing assessment of government spending would evaluate whether public resources are being used in ways that support people to age well—maintaining health, independence, dignity, and social participation. Instead of only looking at “costs of ageing” (e.g., pensions, hospitals, aged care), it reframes the analysis toward investments across the life course that reduce vulnerabilities in older age.	Elderly	Government- particularly finance ministries	Quality of public services Health care costs Ageing population - staffing gap
<i>Reduced working hours</i>				
Public Campaigns, support and training, case studies to promote shorter working week	Provide individuals and institutions with the knowledge and networks to allow them to make the decision to reduce their working time, explaining the benefits, barriers and how to overcome them	Workers Businesses	Local authorities Educators Grassroots actors Wellbeing sector	Working hours Materialism Overconsumption
Public information campaigns on sustainable lifestyles made possible with reduced working hours	Provide individuals with the knowledge needed to take advantage of reduced working time to adopt more sustainable lifestyles	Workers	Local authorities Educators Grassroots actors	Infrastructure for sustainable lifestyles
Universal Basic Services and Universal Basic Income	Public provisioning of basic services and income reduces financial stress and need to work full time/overtime, improves overall mental and physical health by reducing stress. Public provisioning also provides opportunities to meet needs in a more environmentally friendly way e.g. public transport	Society at large Low-income communities	Governments Local Governments	Working hours Materialism Overconsumption Demand for curative care Income - financial stress
Basic Income for those living sustainable lifestyles	Incentivise and subsidise sustainable lifestyles, allowing those adopting them to work fewer hours	Those pursuing sustainable lifestyles	Government	Working hours Infrastructure for sustainable lifestyles
Mandatory equal parental leave, including paternity leave that can only be taken when the mother is at work (not concurrently with	Encourages men to become care givers and reduces income inequalities contributing to wider gender equality	Households	Government Private Sector	Gendered norms Career advancement

maternity leave)				
Negotiation of working contracts based on care responsibilities (children, elderly, self-care etc)	Brings care considerations directly into employment relations and makes care commitments visible	Workers	Government Private Sector - Employers	Working hours Gender norms
Working hour directive	Tighten the EU working hour directive which stipulates maximum number of working hours	Workers (particularly those working long hours)	EU	Working hours
<i>Both</i>				
Care embedded in the education system and curriculum. Topics such as self-care, cleaning, cooking, consumption, financial literacy	Change the underlying values in society around care work and gender roles. Leading to an increase in male participation in formal and informal care work	Care workers Households	Government Local Authorities	Gender norms about care work Appeal of care sector Males in paid care work
Communications campaigns (as in Sweden) to educate on the role of care in socially reproducing society	Change the underlying values in society around care work and gender roles. Leading to an increase in male participation in formal and informal care work	Care workers Households	Government Cities Private Sector Civil Society	Gender norms about care work Appeal of care sector Males in paid care work Public support for government spending
Capacity building / training programmes in workplaces	Raising awareness within policy making sphere on gender dynamics and impacts of gendered division of care. Programmes in workplaces to support more equal care responsibilities which could then have a wider ripple effect in other workplaces	Government officials	Government Local Government Private Sector	Gender norms about care work Appeal of care sector Males in paid care work
Introduce indicators that show the share of paid vs unpaid work in national accounting	Helps to bring visibility to the gendered aspects of care work and how this impacts GDP would provide key data to put the issue on the policy agenda. Could be introduced as part of the beyond GDP indicator package	Policy Makers	Government	Public support for government spending
Investment in sports facilities	Reduces the curative care burden, by promoting active healthy lifestyles and has additional wellbeing benefits	Youth Households	Government Local Government Private Sector	Stress Health and childcare outcomes healthcare costs Demand for curative care

<i>Underlying systems</i>				
Steep wealth tax	Reduction in income which leads to overconsumption, and provides the necessary revenue to raise working conditions and wages in the care sector. Also reduces inequalities, potential health inequalities and thus future demand for curative care	Society at large Wealthy elites Vested Interests	Government	Overconsumption Emissions Tax base Government revenue for care
Tax restructure, tax capital not labour	Provide revenues for care sector, but also addresses the income of the super-rich and their contributions to overconsumption	Society at large Workers Investors	Government EU	Overconsumption Emissions Tax base - GDP Government revenue for care
Tax on high carbon luxuries e.g. SUVs, luxury handbags, international flights etc	Changes incentives for sustainable purchasing, provides revenues to invest in the care sector	Society at large	Government	Overconsumption Emissions
Housing reform, more co-housing projects with shared facilities, smaller private living spaces. Reduction in private kitchens, community cooking programmes.	Reduce the care burden within households and formal care burden, owing to increased wellbeing, reduced stress and loneliness	Society at large Elderly	Government Local Government Private Sector	Stress Health and childcare outcomes healthcare costs Demand for curative care Emissions
Tax on unhealthy consumption e.g. Sugar tax	Reduced healthcare costs by preventing the need for curative care. Also provides government revenue for existing care services	Society at large Youth Households	Government Local Government Private Sector	Government revenue for care Health and child outcomes Demand for curative care
Lobbying transparency index	Allow political actors to regain control over corporate sector and prevent financialisation of the care sector	Care providers Political actors	Government	New part of the system from workshop: relating to the financialisation of the care sector and interests of the corp sector
Gender budgeting	A strategy that involves a gender-based assessment of revenues and expenditures and aims to restructure budgets to accelerate inclusive economic growth by making the allocation of public resources more effective and efficient	Society at large	Government	Fiscal stability Tax base

## Stakeholder mapping

In the final part of the workshop, we used a two-dimensional framework to explore the potential roles of different actors as either aligned with or opposed to each of our proposed transformations. We considered the two propositions separately recognising that some actors might be aligned with one transformation but not with the other.

A few of the highlights from the process were:

- Recognition that domestic care workers are often atomised and therefore unlikely to be a powerful ally, but that associations that bring them together could be effective (particularly in relation to the formal care work transformation)
- Possibility of progressive city actors (such as C40, ICLEI or some city leaders) as allies on both transformations.
- Recognition that service sector trade unions may be more aligned than other trade unions with the formal care work transformation, but that there is potential to build solidarity across trade unions.
- DG Employment as a potential powerful ally for working time reduction.
- Organisations representing older people might be allies for working time reduction, if the case for gradual retirement through slowly reducing working hours can be made.

## Next steps

Hot or Cool has taken on board the learnings from the workshop, and we are developing quantitative models to estimate the impacts of the societal changes. Once we've quantified these impacts, we will engage with allies in the care sector and the environmental sector to help them use the findings in their policy development and advocacy.

## References

- Hot or Cool Institute. (2025). *A Climate for Sufficiency. 1.5-Degree Lifestyles (2025 Update)*. Hot or Cool Institute.
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