

Repositório ISCTE-IUL

Deposited in *Repositório ISCTE-IUL*:

2024-06-19

Deposited version:

Accepted Version

Peer-review status of attached file:

Peer-reviewed

Citation for published item:

Camargo, J. (2022). Is health a just transition issue? cross-cutting multiple crisis: Economic, unemployment, climate and healthcare. In Walter Leal Filho, Diogo Guedes Vidal, Maria Alzira Pimenta Dinis, Ricardo Cunha Dias (Ed.), *Sustainable policies and practices in energy, environment and health research: Addressing cross-cutting issues*. (pp. 609-623).: Springer.

Further information on publisher's website:

10.1007/978-3-030-86304-3_36

Publisher's copyright statement:

This is the peer reviewed version of the following article: Camargo, J. (2022). Is health a just transition issue? cross-cutting multiple crisis: Economic, unemployment, climate and healthcare. In Walter Leal Filho, Diogo Guedes Vidal, Maria Alzira Pimenta Dinis, Ricardo Cunha Dias (Ed.), *Sustainable policies and practices in energy, environment and health research: Addressing cross-cutting issues*. (pp. 609-623).: Springer., which has been published in final form at https://dx.doi.org/10.1007/978-3-030-86304-3_36. This article may be used for non-commercial purposes in accordance with the Publisher's Terms and Conditions for self-archiving.

Use policy

Creative Commons CC BY 4.0

The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a link is made to the metadata record in the Repository
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

Is Health a Just Transition issue? Cross-cutting multiple crisis: economic, unemployment, climate and healthcare

João Camargo

João Camargo Ribeiro Marques dos Santos
joao.camargo.342@gmail.com
DINÂMIA'CET-Iscte
Ed. Iscte
Sala 2W4-d Av. das Forças Armadas
1649-026 Lisboa
Portugal

Abstract

In the aftermath of the Covid-19 pandemic, economic crisis is upon society. Unemployment and layoffs coincide with the need for a revolutionary shift in energy systems and the whole productive system. The push for economic recovery designed in most countries does include a response to climate science, though not at the level required (national and regional plans currently have targets that are not in line with keeping temperatures increase under 1,5°C by 2100). Climate Jobs campaigns in different countries have pushed for the creation of political agendas to shift countries' towards a 45-50% global cut in emissions by 2030, in a framework called “Just Transition”. This framework has been connecting labour and climate, but the focus has been kept mostly out of health issues and the strenuously tested health systems and healthcare workforce, which are a key component of the “care economy”, a central demand of Climate Justice. From the health issues prevalence in labour (in fossil fuel workers in particular) to the increase in health problems connected to the already inevitable impacts of climate change, can Health and healthcare workers become central in the discussion of a new productive system and can healthcare jobs be part of these campaigns and political programs for Just Transition?

Keywords: Healthcare, Climate Change, Just Transition, Climate Justice, Labour

Introduction

The Covid-19 pandemic, having reached over 2 million deaths worldwide, has brought the world economy to a standstill, ushering a global economic recession. There has been a high increase in unemployment in most sectors, but in particular in those connected to tourism, arts, culture, retail and construction. According to ILO (2020), the equivalent to 255 million full-time jobs were lost in 2020 (although translated mainly by rising inactivity rather than immediate unemployment). For 2021, ILO estimates a further job loss equivalent to a range of 36 to 130 million full-time jobs. Governmental support, in particular income support, has been unequal (countries in the Global North have provided cover for lost salaries, but many in the Global South have provided no support, according to Hale *et al.* 2021) but has somewhat served as a buffer preventing some of the worst effects of this double crisis in public health and economic recession. These supports are dwindling, in particular with the initiation of the vaccination process, while discussions on recovery have begun almost since the onset of the pandemic.

During this period, the issue of climate change has been relegated in public debates. Global emissions have tumbled 7% in 2020, but even this reduction is well outside of what the IPCC points

as necessary in its 2018 special report (IPCC 2018). According to this report, to avoid exceeding the threshold level of 1.5°C, as framed in the Paris Agreement, a 45-50% of global greenhouse gas emissions cut by 2030 compared to 2010's levels is required, which implies an unprecedented economic and sociopolitical transformation, both in speed and depth of modification.

According to the United Nations Environmental Programme, 2019 was the year with highest emissions ever, with 59.1 GtCO₂e emitted, 65% of which coming from fossil fuels and carbonates. The CO₂ emissions drop connected to the Covid-19 pandemic “offers only a short term reduction in global emissions and will not contribute significantly to emissions reductions by 2030 unless countries pursue an economic recovery that incorporates strong decarbonization” UNEP (2020). By 2030, the level of annual emissions needs to be within the range of 12 to 19 GtCO₂e to achieve the 1.5°C target.

During the pandemic, health problems and mortality have seen a spike (The Lancet 2020), and these trends will persist over time, with the established direct link between the climate crisis and the aggravation of health issues. Action on climate change is crucial to render the right to health effective. The increase in extreme temperatures, shifts in humidity, increase in disease vectors, as well as the increase in extreme events, combined with an increased prevalence of serious health-related suffering among patients, an ageing population in the West and lack of quality health support in many countries, puts an important focus on healthcare in this period but also on the ongoing energy and digital transition. Covid-19 has further led to a massive increase in the workload of the healthcare workforce, with fatigue and psychosocial stress further straining these workers.

Covid has exposed the strengths and weaknesses of the global and national healthcare systems, with chronic under-investment in education and training of the healthcare workforce and often a mismatch between health systems and health needs. To reach its Global Strategy on Human Resources for Health, corresponding to achieving the United Nations Sustainable Development Goals and health targets, the WHO (2016) proposes a total global health workforce of 81,3 million workers.

The mass mobilisations in 2019 around climate change came to a halt with the global lockdown, yet the popular demands put forward, reflecting the scientific consensus around this existential threat, are still looming over institutions, and have been an identified component in most of the recovery plans for post-Covid19. The grand transformation taking place, far from ideal or even effective in terms of emissions' cuts (Camargo *et al.* 2020), has accelerated with the coronavirus lockdowns, very much focused on energy systems and, to a lesser degree, on transport systems. Yet, this story has begun long before.

In the 1990's, trade unions in North America developed the concept of Just Transition to articulate workers' demands on the new productive systems, namely the workers from high-emitting sectors such as fossil fuel production, energy-intensive industries or aviation. Later, the climate justice movement would support and adopt this concept and, in some countries, climate jobs campaigns were developed to provide a political platform between grassroots climate activists and trade unionists. These campaigns are based on the idea that the most relevant sectors in terms of emissions – energy, transport, construction, forestry, agriculture – will be the stage both for the destruction of some jobs and the creation of others, with the clear indication that many more will be created than those destroyed (Kis *et al.* 2018). This would be a way to achieve said transformation without leading to massive impoverishment or deepening exploitation of natural resources, breaking the dichotomy that associates climate action with unemployment and opening the field for broad political alliances. As these sectors would be the technological stage for a transition, they would also be its main political stage, where it would be possible to mold the transition. On the other hand, the climate justice movement has growingly assumed care economy as a main focus on this transformation as well.

Health systems are a key component of the “care economy” but yet, healthcare work is noticeably absent from Climate Jobs campaigns and Just Transition programs. The reasoning that the campaigns were mostly focused on the sectors most affected by this transition leaves out the fact

that healthcare systems and their workforce will also be at the center of this transformation, likely as much as renewable energies. The Green New Deal (GND) proposal by Alexandria Ocasio-Cortez and Ed Markey in 2018 included Universal Healthcare at its center, and many debates on Just Transition have included the need for free access to quality public services including health, education and care for the elderly. Historically, the labour movement fought for workers interests both as workers and as citizens, which led to a strengthening of all the public sector, including healthcare, education, transport and housing, even more so than industry and energy production. On the other hand, as Stevis and Felli (2020) refer “In the absence of a just transition for workers in the health sector it is not likely that there will be enough support for its green component, particularly since some of the strongest supporters of the GND are unions in the health sector.”.

This chapter aims to discuss the absence of a prominent role of healthcare in the political programs of Just Transition and Climate Justice, in the ongoing transformation which is currently happening, and of the central role that healthcare workers and healthcare jobs can have in the movement for the revolutionary transformation necessary to achieve the necessary greenhouse gas emissions cuts in the next decade.

1. From the Paris Agreement to post-Covid19 economic recovery – Green New Deals and European Green Deal

Within the framework of the Paris Agreement, governments and firms have accelerated towards plans for decarbonization in the sectors of energy, mobility, industry, construction and agriculture. The need to shift into a low carbon economy happens in a degraded institutional framework with depleted financial sectors and the global pandemic that further degraded the ideal conditions for this shift. The push for new climate policies within the United States and the EU introduced a new set of financing and investment frameworks, combined with post-Covid19 green recovery scenarios. The European Commission's Next Generation stimulus package totals 750 billion euros. The financing framework for the EU for the 2021-2027 period includes €1.074 billion, part of which allocated to climate transition. The action against climate change must accelerate in order to deliver the necessary emissions' cuts to keep global temperature increase under the safe thresholds agreed in the Paris Agreement (Camargo *et al.* 2020). On the other hand, there are currently 188 million unemployed workers and 630 million who work and live in poverty (ILO 2020).

Job creation is a powerful element of political discourse to mobilise investment and social support for climate action. Previous research (Kis *et al.*, 2018; Blyth *et al.*, 2014) indicates that renewable energy sources create more jobs upfront in construction and manufacturing than fossil fuels production. Renewables and energy efficiency are more labour-intensive than fossil fuel operations, both in short-term construction phase and in average plant lifetime (IEA 2020).

The idea of a New Deal, directly derived from Keynesian economics, is to create millions of jobs and wrestle mass unemployment with massive public spending, ascertaining that only governments can turn the tide and restore confidence. That is, to a large extent, what governments in some of the richest countries, namely in the EU and the USA, are proposing, with the addition of important provisions on climate change, namely the need to exert a part of the necessary cuts. In an historical retrospective, it is important not to exaggerate the political cohesion brought about by the original New Deal: Roosevelt's plan was opposed on each proposal and legislation, fought in the courts and Congress. The biggest alliance was with the labour movement: the New Deal strengthened labour rights and created millions of new jobs, increasing the workers organisations that were the political body that sustained this political program.

Ocasio-Cortez and Markey's GND strongly resonates with Roosevelt's New Deal, with the idea of mobilising and creating a political and social body for this political program, anchoring it in trade unions and the strengthening of workers and poor people's rights, proposing a broad spectrum of new economic rights such as healthcare, housing, food and a clean environment. Joe Biden's political platform has watered down this proposal, both in terms of emissions cuts (the GND proposed net-zero emissions across the economy by 2030, while Biden proposed that this only

happens by 2050) and spending (the GND number is at US\$18 trillion over 30 years according to Drollete, 2019, while Biden proposed US\$1,7 trillion in over 10 years). Yet, combined with his US\$1.9 trillion pandemic-relief bill, this is already the highest public relief package in the USA since Roosevelt's New Deal.

On the other side of the Atlantic, the European Green Deal was proposed in 2019 as a European Union strategy for intervention on the economic sectors, in particular electricity, transport, heating and industrial processes, to achieve emissions neutrality by 2050. For this, it would create a European Climate Law that legally binds its Member States to collectively reach net zero greenhouse gas emissions by mid-century and create a Just Transition Fund, to mobilize 143 billion euros until 2030.

None of these plans achieve the necessary emission cuts, namely as they have no provision for the dismantling of the current oil, gas and coal production capacity and infrastructure (the US is the world's biggest producer of oil and gas, as well as the third producer of coal), as the biggest emitters of greenhouse gases are now based in the Global South (and the US and EU import their manufactured products, promoting carbon leakage) and there is no global integrated approach to emission cuts, with a focus on achieving neutrality rather than actually cutting emissions.

The latest Paris Agreement Synthesis Report about governments' pledges on emissions cuts (https://unfccc.int/sites/default/files/resource/cma2021_02E.pdf), puts total GHG emission levels from implementation of government targets in 2030 at 0.7% lower than 2010's emission levels, rather than the identified target of 45-50%. There is currently a 98,9% gap between climate policy and climate science.

The focus of economic recovery around the world is looking into reestablishing the same productive and distributive system that had fuelled climate crisis before the shutdown. According to the Energy Policy Tracker (2021), since the beginning of the pandemic, G20 countries committed at least US\$260 billion to support fossil fuels.

2. Climate Jobs campaigns and the Just Transition framework

According to the Portuguese climate jobs campaign (Empregos para o Clima, 2017), climate jobs are:

- New jobs, created to stop global warming, *i.e.* directly contributing to reduce the amount of greenhouse gas emissions released into the atmosphere;
- Dignified jobs, with fair conditions, that respect the rules of environmental protection, health, hygiene and safety at work;
- Created under the public sphere as a public service.

This definition is not common to all climate jobs campaigns and to all Just Transition literature. There are concrete contradictions between capacity, autonomy and willingness of state and inter-state institutions to oversee a Just Transition in a neoliberal capitalist framework, where control over energy production and consumption is shared or delegated to private companies while states have weaker institutional powers than ever.

According to the Global Climate Jobs campaign, 150 million jobs need to be created in the next 20 years, to cover the world with renewable energy like wind and solar power that produces the entirety of electricity, to switch from cars to buses and trains, and run almost all transport on renewable energy, to insulate and convert all homes and buildings to use less energy and to heat with renewable energy and to convert and redesign industry to use less energy and renewable electricity wherever possible. According to the campaign, these jobs will be in renewable energy, construction, and transport. There are currently eight national climate jobs campaigns: Canada, France, Norway, Portugal, Scotland, South Africa, United Kingdom and United States.

Climate jobs are often at the center of the demands/discussion of the growing stream in the literature sustaining that the transition to a low carbon economy should address not only emissions but also justice, the idea at the base of the concept of Just Transition. According to the International Trade Union Confederation's Just Transition Centre, a Just Transition “secures the future and

livelihoods of workers and their communities in the transition to a low-carbon economy. It is based on social dialogue between workers and their unions, employers, government and communities.”. Sweeney and Treat (2018) add to this definition the creation of climate jobs and the emergence of energy democracy. In 2015, the concept of Just Transition advanced dramatically into the mainstream, with the Paris Agreement including in its text the need for “a just transition of the workforce and the creation of decent work and quality jobs” (UNFCCC 2015).

There are significant differences between definitions of Just Transition, measured in different scales, levels of inclusiveness and fairness across sectors and geographies, as well as the scope of justice (distributional, procedural, recognition & restorative) (Stavis and Felli, 2020). There is also a very significant difference between the climate jobs advocated in the Just Transition literature and the jobs created in the transformation currently happening.

When addressing Just Transition, environmental justice literature extends distributive justice concerns to the allocation of environmental goods and harms, including those related to health and wellbeing (Ciplet and Harrison, 2020), but has clearly divided the “green” (environmental impacts) and “brown” (jobs and public health) frameworks for mobilising opposition to energy infrastructures.

3. Just Transition and social acceptability of decarbonisation

Increasing jobs is not enough to ensure successful climate mitigation or justice goals. Ciplet and Harrison (2020) include the need to create “decent” jobs, directly connected to job quality, attractiveness to people who lost employment in traditional industries, accessibility to people from different backgrounds and skill sets (Pai *et al.* 2020). Other authors highlight the importance of job security, long duration and “forms of community resilience and innovation in the face of dynamic energy markets” (Healy and Barry 2017).

Skill gaps and a dichotomy between winners and losers in the transition may contribute to reduce the social acceptability of transition which is crucial for its success, with different strategies for decarbonisation overlapping with previous social and economic conditions (Galgóczi 2020). Many strategies for decarbonisation outside the concepts of Just Transition and Climate Justice may “simply displace ecological destruction and extractivism for industrial development and profits to more vulnerable communities” (Sovacool *et al.* 2021), with political consequences, not only for the workers affected, but for the entirety of communities engaged in this transformation. New renewable technologies and systems, still subordinate to the logic of neoliberal capitalism, will continue to be highly susceptible to boom-and-bust cycles. The very concept of Just Transition is at risk of being denied by workers and trade unions themselves, if processes are perceived as unjust transformations with no social and community participation.

Beyond job creation, wage and contractual conditions, other forms of satisfaction also contribute to social acceptability outside of the confines of work, such as the development of social relations, sharing goods and time and caring for people in need (Rätzl and Uzzell 2019). Some of the political consequences of the transition include questioning of the notions of work, growth, consumption and relationships with nature and other communities. Also in political terms, movements involved in Just Transition, be them climate justice grassroots or trade unions, have been divided between 'affirmative', advocating for transition within the capitalist political-economic system and 'transformative' who envisage a post-capitalist transition (Gough 2010). The different outcomes of the strategies followed and the transformation occurred will push these actors into any of these directions.

When the term Just Transition was first coined in the 1990's, it corresponded to a strategy by unions and environmental justice activists in North America. The Oil, Chemical and Atomic Workers Union suggested a green industrial policy, supporting new jobs for workers in the chemicals, weapons and other toxic industries. Apart from the jobs created, the union proposed occupational, health and environmental rights and standards for all workers, as well as universal health care and the formation of a new labour party (Morena *et al.* 2020), not strictly focusing on

the job component. As Neale (2021) also mentions, “Historically, unions have been built by people who were fighting for greater causes beyond the workplace – the vote, the welfare state, education, health, socialism, colonial independence and racial equality. Climate is that kind of cause.”. The labour movement has in the past ushered broad social change, assuming its agency as proletarians rather than simple wage earners, and we are currently at an historical moment where different waves of political movements and natural phenomena will open the window of a grand transformation, and labour could be at the forefront of this, provided it sees itself as something broader than the sum of its parts (Velicu and Barca 2020). Yet, according to Barca (2019), in the last four decades, labour has adopted ecological modernization and western lifestyle “as the only possible definition of well-being, one to be extended into the future via a green growth agenda”.

Uzzell (2010) further raises the question of workers and communities' identities as intimately connected to their professions, with pride in one's work identified as a possible further obstacle for a Just Transition. To counteract on this, many works left “outside” the productive sphere need to be valued: social work, care and education, maintenance and creative work. According to Rätzl and Uzzell (2019), the labour movement should re-transform into a social movement, promoting the participation of their members not only as workers, but also as citizens, expanding its action into creating a world they want to live in and a different life they want to lead.

Finally, there is a contradiction between the rapid shift to low-carbon societies and the increased extraction of minerals and metals, with intensification of social and ecological injustices elsewhere (Bainton *et al.* 2021).

4. The current transformation

A transformation in the energy sector towards renewable energies and lower carbon emissions is happening. Yet, the rhythm of change is still far from enough and justice is not an integral part of the process. To respond to climate change as the existential threat to humanity that it is, a transition needs to accelerate and drive the transformation to other sectors in society. This transition needs high levels of social acceptability across social groups, economical sectors and geographies, which implies broad scopes of justice. The current transformation focuses mostly on a diversification of assets portfolio from private companies in the energy and transport sectors, with emergency public funding support.

As referred, the willingness of workers to support climate policies is substantially affected by the job losses that can be rightly or misleadingly attributed to these policies. Dissatisfaction can be amplified if these losses concentrate in particular social groups or geographies that have suffered from economic recession or increasing competition with globalisation. This is true independently if at a more aggregated level the benefits of carbon mitigation (including air quality and new jobs) largely overpass these job losses. This concern has become particularly urgent as societies are confronted with the perceived need to recover from the socioeconomic consequences of the pandemic.

Among the key drivers for the current energy transformation, beyond climate change, are air pollution and health impacts. Health plays a leading role in the transformation for society at large, in the short-run and in the medium-run, both connected to pollution and to climate impacts but, “unless the health effects of climate change are easily understandable, verifiable and perceived to be large, poorer households are unlikely to be willing to support” Just Transition (Vona 2018). Often, job creation takes precedence over health issues, even for the people most affected by the most polluting activities and infrastructure. A focus on fossil fuel production, Healy and Barry (2017) argue, draws new focus on overlooked elements of the productive cycle, such as human health impacts in the actors that organise extraction, processing and distribution of fossil fuels, paying attention to ecological damage and health impacts for those living and working in these degraded environments, the fossil fuel's 'sacrifice zones'. With privatization and outsourcing of services and disaggregation of activities that support industrial production, many overlooked workers in the industry and communities suffer these impacts without being acknowledged as part of the industry and left outside the transition process. In the oil sands in Canada “for example, women and

racialized workers are highly overrepresented in feminized and invisible service, retail and care work” (Mertins-Kirkwood 2018).

The current transformation is the antithesis of a Just Transition. Rather than a participated and planned shift in productive systems, it is a top down transformation, strictly based on technological modifications and intensification of extractivism. This transformation aims to achieve the continuation of economic growth based on material expansion (even in the shift for renewables) and the displacement of highly emitting sectors into other regions of the globe. In 2019, the world consumed 100.1 Gt of materials, divided between minerals (50,8 Gt), ore (10.1 Gt), fossil fuels (15.1 Gt) and biomass (24.6 Gt). Of all the materials consumed, only about 8.6% were reused or recycled, with a material waste of 91,4 Gt in various forms (<https://www.circularity-gap.world/2021>).

The announcement of the closure of fossil fuel infrastructures has been met with resistance from workers as they are kept well out of the process, equated simply as a factor of production.

5. The healthcare workforce, Just Transition and Climate Justice

According to the WHO (2016), in 2013 the global health workforce was over 43 million (9.8 million physicians, 20.7 million nurses/midwives and 13 million other workers). According to its projections, the WHO estimates that by 2030, this number will rise to 67.3 million (13.8 million physicians, 32.3 million nurses/midwives and 21.2 million other workers), well beneath the 81,3 million workers identified as necessary to achieve the UN Sustainable Development Goals.

Global health spending has been on the rise between 2000 and 2018, reaching 10% of global GDP that year, with US\$ 8.3 trillion (WHO 2020). According to the Economist Intelligence Unit (<https://www.eiu.com/n/campaigns/Covid-19-the-impact-on-healthcare-expenditure/>), in the world's 60 biggest economies healthcare spending fell under Covid19, due to non-urgent care cancelled and populations avoiding hospitals and clinics, but continued to rise at the global level 10.4% of GDP in 2020. The delays in non-urgent treatments, as well as the treatments and vaccines for the virus will result in a surge of healthcare spending, while the exposed problems in the systems will likely lead to a consolidation of that spending.

Haines and Scheelbeek (2020) identify many benefits for health in climate action beyond the reduction of GHGs, namely the reduction of fine particle air pollution, reducing premature mortality from ischaemic heart disease, stroke, chronic obstructive pulmonary disease by ~3.6 million annually worldwide. There would also be major benefits from a greater use of public transport, walking and cycling, from the provision of green spaces in urban areas with improvement of mental health and the reduction of urban heat islands. Improvement of housing through retrofitting, insulation and adequate ventilation would reduce cold and heat exposure, further improving conditions for healthier living. A major shift in diets would include healthier and less processed foods, with a reduction in consumption of red meats. This would lead to a reduction in obesity and risk of heart disease and strokes.

Although health co-benefits for the transition are identified, they are an often undervalued and a non-quantified aspect: but the cost of transition in any given scenario of the Paris Agreement compared to health co-benefits is very favourable. The entire cost of reducing emissions in all of Asia could be covered by the health co-benefits in China and India alone. In the EU, health co-benefits do not exceed the cost of transition, yet may cover from 7% to 84% of the cost, while in the USA it may cover 10% to 41% of the cost (Markandya *et al.* 2018). This implies that very stringent mitigation efforts might be much more financially “acceptable” by including health co-benefits.

The impacts of climate change on health are a major issue, as the enormous environmental degradation that global warming implies, in whichever scenario, will create a society of less healthy individuals, less healthy communities and weaker healthcare systems. The impacts of a new climate on human health are usually divided between (<http://unionsforenergydemocracy.org/climate-change-and-health-gnu-2019/>):

- Those directly related to the exposure to extreme weather and new climatic conditions (storms, floods, droughts, forest fires);
- Those connected to the disruption in ecosystems and weather patterns that conduce to water scarcity, poor quality water, food shortage, malnutrition, and increased disease vectors;
- Those which result from the civilizational disruption produced by the material collapse of social, political and economic systems, with frequent violence and mass dislocation of populations.

Mental health risks are highly exacerbated by all of these impacts, and in particular by their likely overlap and the increasing number of people and communities exposed to them, leading frequently to depression, anxiety and Post-Traumatic Stress Disorder.

These are risks which are already materialising, and that will further intensify with the increasing temperature, up to the point of systemic rupture.

In 2018, the WHO predicted direct damages to health from climate change between \$US2-4 billion per year until 2030, with an additional related 250 thousand deaths per year between 2030 and 2050 due to aggravation of malnutrition, malaria, diarrhoea and heat stress (figure 1). This leaves out the unquantifiable impacts of mass dislocation of population and conflicts. Robinson and Shine (2018) point out that without decisive climate action that curtails the worst effects of runaway climate change, the need to keep temperature increase under 1.5°C compared to the pre-industrial age, there is no possibility of achieving the fundamental human right to health.



Figure 1. 250000 additional deaths per year between 2030 and 2050 (WHO, 2018)

According to 2020 Lancet Countdown on Health and Climate Change (Watts *et al.* 2021), in 2018 extreme heat produced 296 000 deaths, the climate suitability for dengue fever, malaria and Vibrio bacteria transmission has risen and direct effects of coal combustion have led to more than 1 million deaths, with some 390 000 of these as a result of PM2.5 particles. Global deaths from PM2.5 pollution in 2018 were estimated in 3.01 million. Crop yield potential has declined by 1.8-5.6% between 1981 and 2019, and excess consumption of red meat has led to some 990 000 deaths in 2017.

Despite this, climate change is mostly framed without regard to health impacts. Less than one-tenth of all peer-reviewed articles about climate change discuss health dimensions and, in the political arena, the connection between health and climate change is rarely mentioned in international or national fora (Watts *et al.* 2021).

The global healthcare system is responsible for around 5% of global GHG emissions (Haines and Scheelbeek 2020). The known effects of climate change on human health, specially on the most vulnerable populations, are overwhelming. Yet, workers in the healthcare system have been mostly excluded as stakeholders in the public debate both on Just Transition and on Climate Justice.

On Just Transition, a concept that had its origin in highly polluting sectors and that aimed at bridging the gap between workers and environmental and social movements, the focus was on making clear the beneficial effects of a technological transformation away from high-emitting sectors into low-carbon and renewable ones, in job creation and in environmental gains. As there was no perceived destructive effect of this transition in the healthcare sector, it was left outside.

Climate Justice, on the other hand, expressed the interdependency between all societies for a simultaneous and common shift from the fossil fuel economy, and also on the need to live differently (Goodman 2009). Partially adopting the framework of Just Transition, according to the Bali Principles of Climate Justice, it “affirms the right of all workers employed in extractive, fossil fuel and other greenhouse-gas producing industries to a safe and healthy work environment without being forced to choose between an unsafe livelihood based on unsustainable production and unemployment.”. Emerging initially from social and indigenous movements in the Global South, and strongly based in the 1991's Environmental Justice Principles, the 2002's Bali Principles only addressed health issues as consequences of planetary degradation, with a focus on planetary and ecosystem health.

6. Is Health a Just Transition issue?

There are calls from inside the healthcare field itself, appealing to the ethical codes of those that work on human health and wellbeing to engage on climate action: “Clinicians, researchers, employees, and citizens need to assert daily that there is a climate emergency, and to act accordingly.” (Rouf and Wainwright 2020).

It seems that, beyond the political program of Climate Jobs, the broader framework of Green New Deals or similar is more adequate for healthcare as a core issue, both in terms of jobs and of collective political action. That is, Health seems to be less of a Just Transition issue and more of a Climate Justice issue.

“Nurses’ unions are already playing an important role in the fight for climate justice.” according to Sweeney *et al.* (2019), participating in the struggles against fossil fuel projects and supporting the victims of climate change all around the world. The call for a further engagement, specifically as a group and specifically relating to the issue of climate change itself, seldom occurs.

According to the Glasgow Agreement, signed in November 2020 by global climate justice movements, Climate Justice “acknowledges and integrates the care economy into daily life, with the shared responsibility of persons, regardless of their gender identity, for care and maintenance activities, both inside homes and within society - climate justice puts life at the centre”. The care economy and reproductive labour are inside the Climate Justice agenda, in a clear articulation with feminist and ecofeminist perspectives, and it advocates the works of sustaining life as a core issue, with domestic work, teaching, nursing and healthcare in the spotlight.

Barca (2020) stresses the overlay with the sexual division of labour, with the attributed role of breadwinners for men, bargaining for wages that damage their health or accept jobs that compromise the health and safety of communities and territories, while women are the caregivers “with little or no bargaining and decision-making power in society”. Is Health relegated due to its predominantly female composition and interpretation, with its reproductive labour?

The engagement of the healthcare workforce and the caregiving community in climate action is still hindered. Krisberg (2020) stresses that healthworkers have a key role as messengers, that would highlight how climate change affects people directly and how it affects communities in a differentiated way, reducing the idea that it is strictly an environmental issue. Health as a Climate Justice issue also attenuates a technocratic view of the transformation currently happening and the

one needed, by framing climate change through a human and even personal perspective, rather than an energy, transport or agricultural sector problem.

Specifically for nurses, Sweeney *et al.* (2019) outline six key areas where they can use expertise and political strength to fight climate change, to achieve climate and health justice:

- support and participate in campaigns to stop the expansion of fossil fuel use;
- demand that vital health services are fully staffed and capable of responding to climate instability;
- use their voice in helping to ensure that countries and regions plan for the future in ways that can best protect vulnerable populations;
- continue to draw attention to the roles that poverty, racism, and the lack of workers’ rights play in exposing oppressed people to the worst impacts of climate change;
- push for a shift towards a “public goods” approach to climate and health policy, anchored in adequately funded public services;
- fight for energy democracy and the extension of public control over energy generation and use.

The strength of the health workforce is highly significant. Their social legitimacy would greatly benefit the popular support needed to achieve any form of Just Transition, even when it happens in other sectors. There will be a very important increase in demand for healthcare workers in a growingly degraded climate, which will not stop unless runaway climate change is averted by the greatest social transformation in History. Not only do healthcare workers increase the legitimacy of a Just Transition, they would be a key group to achieve a magnified social acceptability, stressing the need to make visible the health co-benefits of a Just Transition and adding invaluable health inputs on the benefits of a different, slower and less destructive productive system and a humane society. In any case, healthcare workers will need to grow immensely and globally to respond to the climate crisis.

Gorz (1982) affirmed that workers are no longer the key agent of social transformation in rapidly changing world societies. The idealization of workers as industrial labourers and farmers, rather than the existent variety of workers, to which massive unemployment and labour precarity add complexity, prevents society from seeing how other social groups and sectors, and even the more invisible, like caregivers, might help or even lead this revolutionary transformation.

Covid19 has taught us that governments can make enormous changes and that it is more than reasonable to demand the impossible, because some times it happens the week after and when money is needed, it is there. It has also taught us that society under capitalism is organized to put profit before life, even if it means the sacrifice of health care workers and others that are deemed “essential”. The crisis in care, with the burden on healthcare, caregivers and specially women, intensified dramatically and will continue to do so in the Anthropocene.

Health already is a core issue on climate change. The absence of a political expression for this reality is a damaging contradiction for health care workers, for the Climate Justice movement and for all of society.

References

- Bainton, N., Kemp, D., Lèbre, E., Owen, J. and Marston, G. (2021). The energy-extractives nexus and the just transition. Sustainable Development. DOI: 10.1002/sd.216
- Barca, S. (2020). Forces of Reproduction - Notes for a Counter-Hegemonic Anthropocene. Elements in Environmental Humanities. Cambridge University Press. DOI: 10.1017/9781108878371
- Barca, S. 2019a. “Labour and the Ecological Crisis: The Eco-Modernist Dilemma in Western Marxism(s) (1970s–2000s).” *Geoforum* 98: 226–235. doi:10.1016/j.geoforum.2017.07.011.

- Blyth, W., Gross, R., Speirs, J. et al. (2014). Low carbon jobs: the evidence for net job creation from policy support for energy efficiency and renewable energy. London, UK. Energy Research Centre (UKERC)
- Camargo, J., Barcena, I., Soares, P., Schmidt, L. and Andaluz, J. (2020). "Mind the climate policy gaps: climate change public policy and reality in Portugal, Spain and Morocco". *Climatic Change* 161 1 (2020): 151-169.
- Ciplet, D. and Harrison, J. (2020). Transition tensions: mapping conflicts in movements for a just and sustainable transition, *Environmental Politics*, 29:3, 435-456, DOI: 10.1080/09644016.2019.1595883
- Drollete, D. (2019). We need a better Green New Deal — An economist's take. *Bulletin of the Atomic Scientists*. <https://thebulletin.org/2019/03/we-need-a-better-green-new-deal-an-economists-take/>
- Empregos para o Clima (2017). 100 000 Empregos para o Clima - Empregos com dignidade para o clima e a sociedade [100.000 Jobs for the Climate – Dignified jobs for climate and society]. 2nd Edition. <http://www.empregos-clima.pt/wp-content/uploads/2017/10/Empregos-para-o-Clima-relat%C3%B3rio-completo.pdf>
- Energy Policy Tracker (2021). Public money commitments to fossil fuels, clean and other energy in recovery packages, USD billion, as of 31 March 2021. <https://www.energypolicytracker.org/region/g20/>
- Galgóczi, B. (2020). Just transition on the ground: Challenges and opportunities for social dialogue. *European Journal of Industrial Relations*, Vol. 26(4) 367–382. DOI: 10.1017/9781108878371
- Goodman, J. (2009). From Global Justice to Climate Justice? Justice Ecologism in an Era of Global Warming, *New Political Science*, 31:4, 499-514, DOI: 10.1080/07393140903322570
- Gorz, A. (1982). *Farewell to the Working Class an Essay on Post-Industrial Socialism*. London: Pluto Press
- Gough, J. (2010). Workers' strategies to secure jobs, their uses of scale, and competing economic moralities: Rethinking the 'geography of justice'. *Political Geography* 29 (2010) 130-139. doi:10.1016/j.polgeo.2010.02.005
- Haines, A. and Scheelbeek, P. (2020). European Green Deal: a major opportunity for health improvement. *Lancet*. 2020 Apr 25; 395(10233): 1327-1329. doi: 10.1016/S0140-6736(20)30109-4. Epub 2020 Feb 12. PMID: 32394894.
- Hale, T., Angrist, N., Goldszmidt, R. et al. (2021). A global panel database of pandemic policies (Oxford Covid-19 Government Response Tracker). *Nat Hum Behav* (2021). <https://doi.org/10.1038/s41562-021-01079-8>
- Healy, N. and Barry, J. (2017). Politicizing energy justice and energy system transitions: Fossil fuel divestment and a “just transition”, *Energy Policy*, 108, issue C, p. 451-459,
- IEA (2020). *Sustainable Recovery – World Energy Outlook Special Report* in cooperation with the International Monetary Fund. France
- ILO (2020). *World Employment and Social Outlook: Trends 2020*. International Labour Organization, Geneva
- IPCC (2018). *Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. World Meteorological Organization, Geneva, Switzerland
- Kis, Z., Pandya, N. and Koppelaar, R. (2018). Electricity generation technologies: Comparison of materials use, energy returns on investment, jobs creation and CO2 emissions reductions. *Energy Policy* 120: 144-157.
- Krisberg, K. (2020). Making climate change personal improves understanding. In “Climate justice and health: Working together to achieve change” . *The Nation's Health – a publication of the American Public Health Association*.

<https://www.thenationshealth.org/sites/default/files/additional-assets/PDFs/ClimateJusticeSpecialSection.pdf>

- Markandya, A., Sampedro, J., Smith, S., Van Dingenen, R., Pizarro-Irizar, C., Arto, I. *et al.* (2018). Health co-benefits from air pollution and mitigation costs of the Paris Agreement: a modelling study. *Lancet Planet Health* 2018; 2: e 126–33
- Mertins-Kirkwood, H. (2018). Making decarbonization work for workers. Policies for a just transition to a zero-carbon economy in Canada. Canadian Centre for Policy Alternatives, January 2018. ISBN 978-1-77125-382-6
- Morena, E., Krause, D. and Stevis, D. (2019). *Just Transitions: Social Justice in the Shift Towards a Low-Carbon World*. London: Pluto Press, 240 pp. <https://doi.org/10.2307/j.ctvs09qrx>
- Neale, J. (2021). *Fight the Fire – Green New Deals and Global Climate Jobs*. Resistance Books, London The Ecologist, Devon. ISBN 978-0-902869-54-7
- Pai, S., Harrison, K. and Zerriffi, H. (2020). A systematic review of the key elements of a just transition for fossil fuel workers. Clean Economy Working Paper Series April 2020 / WP 20-04. Smart Prosperity Institute
- Räthzel, N. and Uzzell, D. (2019). The future of work defines the future of humanity and all living species. *International Journal of Labour Research*, Geneva: International Labour Office 2019, Vol. 9, (1-2) : 145-171
- Robinson, M. and Shine, T. (2018). Achieving a climate justice pathway to 1.5 °C. *Nature Climate Change* vol 8 July 2018 (564–569). <https://doi.org/10.1038/s41558-018-0189-7>
- Rouf, K. and Wainwright, T. (2020). Linking health justice, social justice, and climate justice. *The Lancet Planetary Health*, vol. 4 issue 4, E131-E131 [https://doi.org/10.1016/S2542-5196\(20\)30083-8](https://doi.org/10.1016/S2542-5196(20)30083-8)
- Sovacool, B., Turnheim, B., Hook, A., Brock, A. and Martiskainen, M. (2021). Dispossessed by decarbonisation: Reducing vulnerability, injustice, and inequality in the lived experience of low-carbon pathways. *World Development* 137 (2021) 105116.
- Stevis, D. and Felli, R. (2020). Planetary just transition? How inclusive and how just? *Earth System Governance*, Volume 6, December 2020, 100065
- Sweeney, S. and Treat, J. (2018). *Trade Unions and Just Transition: The Search for a Transformative Politics*. Trade Unions for Energy Democracy Working Paper 11. Trade Unions for Energy Democracy (TUED), Rosa Luxemburg Stiftung—New York Office and Murphy Institute City University of New York
- Sweeney, S., Shen, I. and Treat, J. (2019). *Nurses’ Unions, Climate Change and Health: A Global Agenda for Action*. Report written for Global Nurses United. <http://unionsforenergydemocracy.org/climate-change-and-health-gnu-2019/>
- The Lancet (2020). Latest global disease estimates reveal perfect storm of rising chronic diseases and public health failures fuelling Covid-19 pandemic. https://www.eurekalert.org/pub_releases/2020-10/tl-pss101320.php
- UNEP (2020). *Emission Gap Report 2020*. Nairobi
- UNFCCC (2015). *Adoption of the Paris Agreement*. FCCC/CP/2015/L.9/Rev.1 UNFCCC, Bonn
- Uzzell, D. 2010. “Psychology and climate change: Collective solutions to a global problem”, in *British Academy Review*, Vol. 16, pp. 15–16.
- Velicu, I. and Barca, S. (2020). The Just Transition and its work of inequality. *Sustainability: Science, Practice and Policy*, 16:1, 263-273, DOI: 10.1080/15487733.2020.1814585
- Vona, F. (2019). Job losses and political acceptability of climate policies: why the ‘job-killing’ argument is so persistent and how to overturn it. *Climate Policy*, 19(4), 524-532.
- Watts, N. Amann, M., Arnell, N., Ayeb-Karlsson, S., Beagley, J., Belesova, K. *et al.* (2021). The 2020 report of The Lancet Countdown on health and climate change: responding to converging crises. *The Lancet* vol 391, issue 10269, p.129-170 doi:[https://doi.org/10.1016/S0140-6736\(20\)32290-X](https://doi.org/10.1016/S0140-6736(20)32290-X)
- WHO (2016). *Global strategy on human resources for health: workforce 2030*. Geneva.

WHO (2018). Climate Change and Health Fact Sheet February 2018. Geneva.

<https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

WHO (2020). Global Spending on health: weathering the storm. Geneva. ISBN 978-92-4-001778-8 (electronic version)

Short biography:

João Camargo (1983) has a background on environmental and agrarian sciences and holds a PhD in Climate Change and Sustainable Development Policies from the University of Lisbon, with a thesis titled “Climate Change, new Metanarrative for Humanity: Climate Policy in the western Mediterranean”. He was an assistant professor and taught Chemistry, Botany, Scientific Methodology, Plant Taxonomy and Systematics at Universidade Lúrio, in Mozambique. He worked as a journalist and as press liaison and policy advisor for environmental NGOs. During his PhD he participated on projects around climate adaptation, climate policy and forestry, producing conference abstracts and conference papers, and has published two books: Manual de Combate às Alterações Climáticas [Climate Change Combat Manual] (2018 and a Spanish adaptation in 2019), and Portugal em Chamas, como Resgatar a Floresta [Portugal in Flames, how to Rescue the Forest] (2018). He has published peer-review papers on climate policy and the climate justice movement and regularly writes for newspapers and magazines about climate change, forests, environment, energy, labour and social movements. He is engaged in the global climate justice movement and with global climate jobs campaigns.