DISCUSSION PAPER
FEBRUARY 2021

A Rapid and Just Transition of Aviation

Shifting towards climate-just mobility

Covid-19 has grounded air traffic almost entirely. In countries under lockdowns, operating flights dropped well below 10% for many months[1]. The aviation industry itself expects to be operating at a lower capacity for the next three to five years[2]. Also the worldwide tourism sector faces a prolonged crisis[3]. Workers in the aviation industry, as well as communities dependent on tourism, have been among the hardest hit.

Acknowledging the prolonged crisis due to Covid-19 and further inevitable changes in these industries due to automation, digitalisation[4] and of course climate heating, we need to be realistic: **aviation (passenger and freight) and tourism will change – and they will do so either by design or by disaster.**

This paper discusses how long-term security for workers and affected communities could be guaranteed, without returning to business as before Covid-19. Using this moment for such a transition is the best and only realistic possibility that exists: all industries will have to align with the global climate targets established in the Paris Agreement - and science tells us that if this is not achieved in the next years, it will be too late.

If we add all reduction pledges made by nation states and assume they are kept, then we are still on track for an increase in global average temperature of 3.2 °C above pre-industrial levels[5]. In the absence of policies, the world is on course for at least 4 °C[6]. We talk about temperatures where it is almost inevitable that tipping points are reached – thresholds that, when exceeded could push the climate into a completely new state[7]. These include collapsing ice sheets and thawing permafrost to shifting monsoons and forest dieback. The world faces ever harder hitting crises, further pandemics, extreme weather events and millions of displaced people, if a climate-just transition is not managed now.

In 2018, emissions from civil aviation were responsible for around 6% of climate heating worldwide and growing[8], produced by a world minority. With no realistic technological options for green passenger flights in sight for the next decades, a rapid transition towards climate-safe mobility is needed. However, this must be a 'just transition', one that does not bring about devastating effects for people and communities trapped in a fossil fuel-based system. Acknowledging and reacting to the justified fear of unemployment and loss of livelihoods is the only way to build support for climate action. It is an important element of 'climate justice'.

The demand for a 'just transition' has been developed by trade unions and the climate justice movement. It aims to protect workers and communities currently dependent on fossil fuel industries but is also a broader process to help safeguard the future of workers, communities and the planet. It is not an argument for delaying the changes needed, rather for managing them effectively, fairly and democratically. In the context of looming climate breakdown and the current mass extinction of species, a transition can only truly be 'just' if it is also rapid enough to minimise these consequences.

A just transition will have to find solutions for millions of people working in the aviation industry, as well as others working in tourism and related sectors, while finding the balance to care at the same time for billions affected by climate-induced disasters due to the persistence of a fossil fuel based economic system - a number that has been sharply increasing in the last two decades[9].

This paper is the result of a collective writing process by people active in the climate justice movement, workers in the aviation sector, trade unionists and academics from around the world; facilitated by the global Stay Grounded network. It aims to propose a vision, pathways and criteria for such a just transition for the aviation industry and related sectors. It points out contradictions and asks questions in order to spark discussion, and aims to be one of many drivers for a profound just transition of the aviation sector whilst inspiring transition processes in other sectors.

COVID-19 HAS REDUCED AVIATION – WHY IT NEEDS TO REMAIN LOW

The Covid-19 pandemic caused an abrupt global economic crisis which has severely impacted aviation and tourism. Consequently, many companies have been attempting to rapidly cut costs and lay off workers. Before Covid-19, the global aviation industry claimed to employ as many as 10.2 million people directly at airlines, airports and aircraft manufacturing[10]. This is about the same amount as are employed in the renewable energy sector[11]. These numbers do not include indirect and induced jobs, for example in tourism.

Airlines immediately sought state support, emphasising their importance for employment (2.7 million jobs globally)[12]. **As of August 2020, governments or government-backed entities from 57 countries had committed €137 billion in taxpayer-funded financial aid to airlines** (38% of the projected revenue loss for airlines for 2020). While only around half of this is loans due for repayment, the rest are subsidies (e.g. for wages), equity financing, grants, deferral and/or waiver of taxes and charges, nationalisation and private equity[13]. In Europe alone, governments agreed to deliver €37 billion in bailouts to airlines until November 2020[14].

This money has been granted without effective social or environmental conditions, notwithstanding global protests, like those supporting a 'green recovery' from Covid-19 and the Stay Grounded campaign #SavePeopleNotPlanes backed by about 350 organisations and over 100,000 individuals[15]. Also, leading economists from around the world found unconditional airline bailouts to have the lowest economic payoff[16].

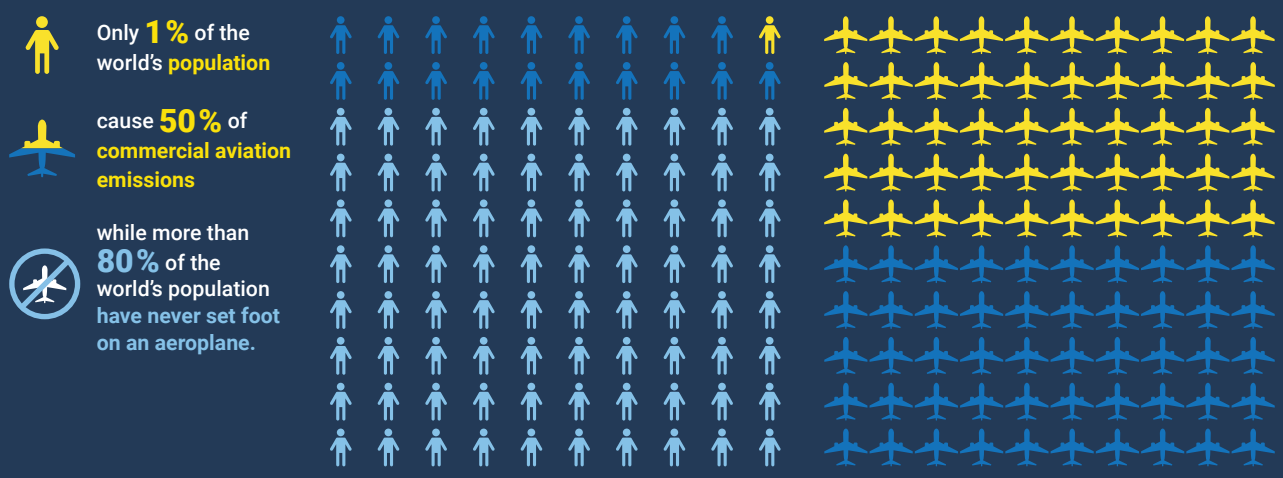
Due to few social strings being attached to bailouts, airlines are laying off a big proportion of their employees[17]. At least 400,000 workers have already been fired or are in jeopardy, and many of those who remain employed are facing permanent pay cuts and re-written contracts with worse conditions, as some airlines are clearly exploiting this crisis to impose terms and conditions which further disadvantage workers[18].

With regard to bailout environmental conditions, in the vanishingly rare cases in which they were announced, like in France and Austria, detailed analysis suggests that the 'green strings' are in fact unenforceable at best and at worst indiscernible from business as usual[19].

Aviation is the most climate harming mode of transport and before the pandemic, it was also the fastest growing source of greenhouse gases. Civil aviation emissions, both CO_2 and non-CO_2-effects[20], accounted for 5.9 % of all human-caused global heating in 2018[21]. Half of this impact was caused by frequent flyers who represent just 1 % of the world's population[22]. Meanwhile, more than 80 % of people have never been on an aeroplane[23].

With flights reaching their lowest level for decades and the aviation industry turning to governments for help, this crisis offers an opportunity to set the industry on a pathway that works for people and the planet.

A major problem the aviation industry faces is that there are no technological solutions yet available for greening air traffic: aviation's electrification is not a plausible option in the coming decades[24] and substitutes for fossil kerosene like biofuels and e-fuels will have harmful consequences if produced in the enormous quantities required. It would most probably lead to more damaging mega-projects, rainforest destruction and land rights violations[25]. **This is why reducing emissions from aviation requires a significant decrease in flights from pre-Covid-19 levels. Possible future technology should not be an excuse to not act now.** As such, the question is: how can such a transition towards climate-safe mobility be designed in a rapid and just way?



A VISION FOR A JUST TRANSITION FOR AVIATION AND RELATED SECTORS

A significant reduction of aviation and it's negative impacts, especially in countries of the Global North which are responsible for most flight emissions (both currently and historically), can be achieved by implementing a combination of policy tools and economic instruments. These include: a reduction in the number of airports and a halt to their expansion; airport slot limits; a ban on advertising and restrictions for lobbying by the aviation industry; stricter noise regulations; feasible measures to mitigate non-CO_2 impacts such as contrail avoidance; a removal of the unfair subsidies; a kerosene tax, an air miles levy and a frequent flyer levy. Most of these measures are described in more detail in the Stay Grounded report "Degrowth of Aviation"[26].

These policies, however, can and will only come into effect and be accepted, if embedded in a just transition of the sector and related industries. It is crucial that these reductive measures are implemented in a way that prioritises fairness to workers, communities already experiencing impacts of the climate crisis, as well as regions which rely on tourism.

WHAT COULD A CLIMATE-JUST MOBILITY LOOK LIKE?

Aviation will be operated within the confines of the planet's and countries' emissions budgets. Flights will be prioritised for those who really need them, for example, for humanitarian emergencies, or where no alternative mode of transport exists.

The adoption of online conferences during pandemic lockdowns can continue to replace frequent business travel. In a survey of chief executives from the 500 biggest US corporations, 91% said business travel will become less frequent, replaced by video conferencing[27]. Decelerated lifestyles and new work time arrangements like more flexible and reduced working hours with the chances to take sabbaticals, will allow people to take time to travel, experiencing the journey and connecting with locals. Reducing working hours can also be an option to support a just down-scaling of industries: instead of firing part of the employees, the work amount could be redistributed with maintained income (at least for the low income sectors).

Depending on the region and local circumstances, a range of comfortable and affordable climate-friendly travel modes will be fostered, in particular night trains, coaches, and modern sailing and solar ships. Child care could be offered onboard trains and at rail stations with convenient waiting rooms and play sites. Integrated and cross-border travel modes and scheduling will be improved. Real global connections will still be important - but regionalised, circular economies will allow for both a diversity of local jobs and consumption of more local goods, reducing "food miles" and reliance upon air-freight[28]. While reducing the quantity of tourism overall, a different type of tourism and travel will emerge.

PART OF AN OVERALL TRANSFORMATION

Aviation is a central part of globalised hyper-mobile capitalism, including business flights and transportation of goods around the world, mass tourism for short breaks from a busy lifestyle[29] and military aviation[30]. **Changes in aviation therefore must be part of an overall societal transformation involving new modes of living, working, producing and consuming.** Questions of how we consume, trade and travel; of who has power and who owns and has access to means of production, finance and technology, are all vital.

It will be impossible to achieve a just mobility system with the existing and rising income disparities. As such, instead of making air tickets continuously cheaper to "democratise flying" (which is the industry's argument), it will be necessary to limit wealth and eliminate poverty through measures like, for example, an unconditional basic income. A basic income could also facilitate the required transition of jobs from fossil-fuelled sectors to sectors that focus upon caring for people and the environment.

The scale of such rapid, progressive, and conscious transition driven by environmental and social imperatives has no documented precedent at a global level[31] - but is necessary and possible with coordinated efforts. It can neither rely on the market to fix the problem, nor on the hope for new and cheaper technologies, nor can it allow for top-down interventions suspending democratic decision-making. Instead, the transition has to be based on inclusive public debates that particularly take into account marginalised parts of society.

PRINCIPLES OF A JUST TRANSITION IN AVIATION AND RELATED SECTORS

Strict down-scaling plans for airports, airlines, aerospace industry and mass tourist resorts (preventing re-growth after the Covid-19 crisis) are necessary to stay in line with a 1.5 °C trajectory. As such, we need a well-planned, clearly set out democratic transition where social dialogue with workers and communities is fundamental at all stages and at all levels and should include:

- **Providing social protection, access to healthcare and income security, allowing workers and their families to meet basic needs, training or education, especially during periods of non-employment within the broader context of supporting livelihoods. Ensuring that protections take into account the increased risks that climate breakdown poses to workers (including those in the informal economy), as well as impacts of gender, race and income inequality.**
- **Promoting the creation of alternative employment, particularly in the most affected regions. These new jobs must reference cutting emissions and improving climate resilience, whilst ensuring decent secure jobs with full rights for workers and union representation; policies to promote rights at work, including health & safety and the right to collective bargaining with democratic control or actual ownership.**
- **Investing in skills development and re-training as needed.**
- **Halting new training and employment in the aviation sector, making sure that people who retire or take another job are not replaced. Providing financial support to airline trainees who have already accumulated high debts and no prospect of starting or continuing their career.**
- **Ensuring that any recovery packages direct and support a just transition rather than bail out the industry to go back to business as usual. This includes substantial financial support for Global South countries from historic emitters (the high-income countries and corporations that have benefited from fossil fuel extraction & use and that are therefore responsible for significant emissions) to enable and support a self-determined just transition.**

A transition can only truly be 'just' if it is also rapid enough to minimise climate breakdown and the mass extinction of species. Driving the above mentioned principles is the knowledge that the longer a transition from fossil-fuel based industries takes, the more unjust and difficult it will eventually be.

EXAMPLES OF JOB TRANSITION

Smaller examples of transition from fossil fuel dependent industries include the abandonment of coal mining in the Netherlands' Limburg province which within a decade, did away with 75,000 mining-related jobs, impacting more than 200,000 people. The government steered the transition, implementing counter-measures such as providing subsidies for new businesses, relocating industries from the capital to the regions hardest hit, and implementing retraining programmes[32]. Similar programmes have happened in other regions - like in Somerset, Massachusetts[33], or in the south of Spain, where a 'Just Transition' plan for closing down all coal mines includes early retirement schemes for miners over 48, environmental restoration work in pit communities and re-skilling schemes for younger miners in cutting-edge green industries[34].

These examples of coal transition demonstrate that it is important to focus on job creation in specific locations, like around airports or former tourism hot spots[35]. One example are the Pacific Islands, where the pandemic led to a sharp decline in tourism. Almost 85% of tourism business owners lost about 75% of their usual income. What partially absorbed the massive economic blow was returning to traditional practices of growing food and fishing. People had access to customary land on which to grow food, as well as to customary systems meaning that neighbours, clan members, and members of church communities helped to provide for those who were more vulnerable[36]. Of course, transition processes will vary a lot between different world regions and local contexts.

In the areas of aircraft design, manufacturing and assembly, there are precedents for using workers' skills to shift production. Back in 1976, the workers at Lucas Aerospace produced a comprehensive plan to switch to making more socially useful products, albeit never being adopted[37]. At the beginning of the Covid-19 pandemic, Airbus' plant in Broughton, UK, was re-purposed to produce life-saving ventilators[38]. Amidst the threat of massive job cuts at manufacturers, there are currently rank and file worker initiatives to develop transition plans.

Also infrastructure can be recycled: in the very centre of Berlin, the former Tempelhof airport now serves as a huge recreational park, with long skating tracks, community gardens, arts spaces and new bird and insect habitats[39]. Airports could also be converted to research centres, hospitals or other useful purposes.

Employees in the airlines could be directly redeployed to railways, which in many countries are in need of workers[40] and where even more jobs will be needed as flights are shifted to trains. Germanwings for example advised its flight attendants to become train attendants[41]. This might not be their original dream job, but taking into account the

severity of the climate crisis, it is difficult to use that argument as a reason to delay the needed transition. Indeed, there are plenty of aviation sector workers who have transferable skills, including people working in sales, marketing, management, customer service, logistics, data analysis, engineering, manufacturing, cleaning or people working in airport shops. Some though, who have a high level of specialism in their existing job, are considered unskilled workers on the labour market. Taking care of these workers, offering adequate retraining and ensuring that new jobs are good, well paid and with union representation, is therefore key. The challenges ahead will need a collective effort and workforce. There will be many opportunities for job creation, including: scaling up climate-safe public transport; recycling materials and infrastructure; expanding renewable energy; agro-ecological food production; regionalised production to reduce freight; afforestation; staffing health and social services; and putting care at the centre of our economy, instead of profit. The money to finance all this exists, as shown by the high subsidies aviation is receiving, the tax exemptions and massive bailouts[42] – let's invest it to provide rewarding, useful and much-needed employment, transitioning not only directly from the aviation sector but also from the related tourism and trade sectors.

WHO WILL PLAN AND MANAGE THE TRANSITION?

A critical dialogue and the joint planning of a just transition must occur amongst trade unions, workers, scientists, climate justice advocates, tourism-dependent communities as well as state and local governments.

Grounded in this meaningful stakeholder engagement, local, national and transnational just transition funds could: receive and manage aviation and other fossil fuel assets and tax incomes; coordinate and finance investment in public and community infrastructure for a new resilient economy; pay for training and skills programmes; and guarantee livelihoods for employees in the affected sectors.

Acknowledging their historic legacy of extraction and forced transfer of enormous amounts of wealth and resources over centuries of colonialism and neo-colonial regulations, countries from the Global North, as well as fossil fuel industries, will have to halt these exploitative interventions and commit to funding transition in the Global South. This should permit communities that grew dependent on mass tourism and related services to diversify their economies in a self-determined way within a 1.5 ºC trajectory scenario. Within that scenario, the demanded self-determination of indigenous peoples has to be respected, which includes self-management, autonomy and the 'defence of life and territory'.

STEPS FOR TRANSITIONING THE INDUSTRY

If this vision for reduced aviation and a rapid and just transition is to take shape, steps now need to be taken amidst the Covid-19 crisis. So what are practical steps to be taken immediatly? As the first bailouts given to the industry in the first half of 2020 are not sufficient for the prolonged crisis, airlines, airports and manufacturers continue seeking taxpayers' money[43]. This section makes the case to stop propping up an industry that will ultimately be forced to downsize.

GIVING MORE BAILOUTS IS NOT AN OPTION

Linking bailouts with social and environmental conditions would not solve the problem: it is unrealistic to set and implement strong social conditions to preserve jobs in the industry, since paying airlines and airports to maintain an overstaffed workforce for years does not make sense. Meanwhile, setting environmental conditions leads to greenwashing, as we saw with the first round of bailouts in spring 2020. These green requirements build on the premise of green growth: of being able to decouple growing aviation from its resource-consumption and emissions, which science tells us will be an illusion in the coming decades[44].

Research and development of future technologies is important but until achieved, immediate climate action cannot be delayed. For example, if all flights in 2017 had been operated with e-fuels (fuels made from electricity), they would have needed more than the existing renewable electricity of the whole world[45]. A demand reduction is therefore essential. If airlines want to survive, most of them would

need to switch their business model: e.g. aircraft manufacturers producing solar panels, or airlines merging with rail companies to integrated transport providers.

It cannot be an option any more to use taxpayers' money for bailing out polluting airlines, airports and related manufacturers. Instead, recovery packages must be directly used to finance a just transition: for a living wage and social protection for workers leaving the industry, retraining programmes, the creation of jobs in climate-safe sectors and for fostering alternatives to flights and mass tourism. Public money must save people, not planes.

If no more public bailout money is given to aviation, this could mean that some companies go bankrupt, whilst some have savings. Others could raise private credits or money from their shareholders. Ending public prop-ups would lead to a necessary downscaling of the numbers of airlines and airports. This would be essential for climate mitigation. Both airlines and airports have been trapped in a highly competitive system, with lots of pressure for low prices, poor working conditions and increasing flight and passenger numbers to remain economically viable. Before Covid-19, in many regions, this led to a highly saturated market, which as Lufthansa has said, "sustained overcapacities caused by carriers willing to accept significant losses to expand their market share".[46]
A stop on public bailouts has to go along with measures ensuring that surviving airlines don't grow on the cost of the others, taking over assets and airport slots from bankrupt companies. This might include changes in bankruptcy laws. Redirecting public spending towards a just transition should be accompanied by the above mentioned measures like a kerosene tax, limits on short-haul flights and a frequent flyer levy. From now on, the aviation industry needs to align with the 1.5 °C pathway.

THE QUESTION OF OWNERSHIP

Some argue for revoking airline privatisations, or nationalising airlines instead of bailing them out or having to deal with the consequences of bankruptcy. Public ownership could have several advantages: for private corporations, emphasis is put on profits and shareholder dividends instead of placing people's needs at the centre of their operations. Increased outsourcing of services, insecure contracts, agency working and concerns around the health, safety and welfare of workers has led to several strikes in recent years[47]. Public ownership could allow for more workers' control and democratic decision-making.

The UK trade union PCS calls for the nationalisation of the sector and for aviation to be part of a new integrated public transport system[48]. Some argue that with nationalised airlines, a transition process could merge airlines and rail companies or create national mobility companies, making it easier to keep and shift jobs[49]. Others promote the merging of airlines, for example into one European Union Airline[50]. This could help to wind-down the competitiveness that has been to the detriment of workers and the environment. One central airline could provide any flights still needed but on a secure basis, with taxed kerosene and union representation.

However, it is by no means given that nationalised companies automatically guarantee more workers' rights, long-term security and a just transition, especially with an authoritarian government in place and countries embedded in capitalist competitive structures. Until now, publicly owned airlines or airports have not proven to be any better in this sense than private ones. For example, many regional loss-making airports are already nationally or municipally owned[51]. There, a process of planned downscaling could and should have already been started.

There are also public ownership models outside of state and municipal ownership. Co-operatives for example usually don't operate for the purpose of achieving growth and increased profits. While they are not automatically a growth model, they are also not necessarily sustainable. Their democratic, more egalitarian and less profit-driven model does however make a social and ecological direction easier. Various forms of workers' control have already been proposed or realised, from the Lucas Aerospace model mentioned above to large cooperatives in Venezuela[52], Argentina[53] or South Korea[54] with flat hierarchies. Further options are also possible from within the state ownership model, giving workers greater degrees of control over future production, decision making and transitioning away from current work.

CONCLUSION

This paper argues that public bailouts for the aviation industry no longer make sense for social, economic and ecological reasons. A massive amount of tax-payer money given to the aviation industry would end up in the hands of already wealthy shareholders and managers. Regardless, the industry would continue to lay off workers due to a prolonged Covid-19 crisis, automation and digitalisation – without social measures, retraining options or new jobs offered in sustainable sectors. After some years, aviation might possibly return to its prior growth path, built on even poorer working conditions and climate destruction. If climate mitigation is delayed any longer, an even bigger crisis is to be expected, truly changing everything. Continuing to ignore the looming climate breakdown is also the most economically insecure path. Bailing out the aviation sector to return to previous business models and their planned growth paths may seem to some desirable in the short term but would mean setting up for an even larger crash when it becomes more obvious that flights are not justifiable in the heat of climate breakdown. **Instead of waiting for changes by disaster, a just transition by design must start now.** A managed downscaling of airports, airlines and manufacturing capacity has to go along with strong social protections, building up climate-just modes of transport and creating sustainable jobs. The above outlined principles for a just transition should always be at the core of this process. What remains open for discussion is the question of ownership in the industry and in every region and country, the precise steps to take might differ.

Since aviation is closely linked to other sectors like tourism, business travel, freight, and military operations, **this transition will need to be part of an overall climate-just transformation of our societies and economies: how we work, produce, consume and live**. The vision we want to pursue is a world where care for people and nature is put at the centre, not profit.

Steps towards a just transition have not yet happened because the current power relations have so far remained unchanged. But Covid-19 has led to cracks in these dominant structures. Cracks that could be broadened out, giving space for the solutions proposed in this paper.

To achieve a just transition of aviation, it is therefore crucial for civil society to:

- discuss more widely visions for other forms of mobility and travel to create a cultural shift;
- limit corporate power on government decisions;
- incentivise critical debates inside trade unions and amongst workers; and
- build political pressure through workplace and other action, challenging reluctant politicians, large-scale protests, advocacy and other means.

If these steps are taken and heed is paid to the above principles, we may still be able to achieve a fair and climate-just recovery from the current crisis – one with built-in resilience for future crises.

We invite readers to give feedback and contributions to this discussion on a just transition of aviation. Please write to: info@stay-grounded.org

PCS – Public and Commercial Services Union
160 Falcon Road
London SW11 2LN, Great Britain
www.pcs.org.uk
tahir@pcs.org.uk

STAY GROUNDED
Neustiftgasse 36
1070 Vienna, Austria
www.stay-grounded.org
info@stay-grounded.org
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END NOTES & LITERATURE

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