



POLICY BRIEF

COVID-19: AN EYE OPENER TO UPSCALE INVESTMENTS IN SUSTAINABLE TRANSPORT TO ACCELERATE PROGRESS TOWARD A MORE LIVABLE AND CLIMATE RESILIENT FUTURE



Task Force 11

**COVID-19: MULTIDISCIPLINARY APPROACHES
TO COMPLEX PROBLEMS**

Authors

**RADIA SEDAOU, AHM MEHBUB ANWAR, FARHINA PASHA, AISHAH
ALATAWI, STEVEN GRIFFITHS**

موجز السياسة كوفيد-١٩: منبّه للارتقاء بالاستثمارات في النقل المستدام من أجل تسريع التقدم نحو مستقبل أكثر قابلية للعيش وأكثر مرونة من حيث المناخ

فريق العمل الحادي عشر
جائحة فيروس كورونا المستجد (كوفيد-١٩): نُهج متعددة
التخصصات لمعالجة المشكلات المعقدة



المؤلفون

راضية سيداوي، أحمد محبوب أنور، فرهينة باشا، عائشة العطوي، ستيفن جريفش



ABSTRACT

The central role of transport has been brought to the forefront due to the COVID-19 pandemic, and this in turn has translated into impacts across multiple sustainable development goals (SDGs). Major challenges include the impact of COVID-19 on consumer behavior and urban mobility, availability of finances, and slow progress on sustainable energy and climate actions. To overcome these challenges, this policy brief provides G20 member countries with a number of sustainable and environmentally friendly proposals. They focus on (i) upscaling transport infrastructure, energy conservation and energy efficiency; (ii) agile mobility network; (iii) enabling low emissions and green technologies; and (iv) unlocking financial resources and public-private partnerships.

أبرزت جائحة كوفيد-١٩ الدور المحوري لقطاع النقل ، و تُرجم هذا بدوره إلى تأثيرات على مستوى أهداف التنمية المستدامة المتعددة. وتتضمن التحديات الرئيسية أثر كوفيد-١٩ على سلوك الاستهلاك والتنقل الحضري، وتوافر التمويل، وبطء التقدم في إجراءات الطاقة المستدامة والمناخ. ومن أجل التغلب على هذه التحديات، يقدم ملخص السياسة هذا لأعضاء مجموعة العشرين عددًا من المقترحات المستدامة والصديقة للبيئة. والتي تركز على: 1. الارتقاء بالبنية الأساسية للنقل والحفاظ على الطاقة وكفاءة الطاقة. 2. مرونة شبكات التنقل. 3. تمكين التقنيات الخضراء ومنخفضة الانبعاثات. 4. فتح مصادر التمويل والشراكات بين القطاعين العام والخاص.



CHALLENGE

Consumer Behavior

Governments across the world have responded to the COVID-19 crisis by calling on their citizens to engage in only essential movements to minimize the risk of disease transmission. This has led to increasing use of alternate modes of working and learning (e.g. telecommuting and e-learning) as well as walking and bicycling as means of travel. This demonstrates that COVID-19's effects on consumer behavior may be prompting longer-term changes in both demand and supply for transport services. Thus, COVID-19 needs to be considered as a cross cutting factor in post recovery policies.

Urban mobility

Substantial reductions in transport usage caused by the COVID-19 pandemic have negatively impacted many industries in the short to medium term. Companies, governments, and individuals are already suffering from the economic toll of the crisis in the form of job losses, income taxes, and wages, for example. Transport and logistics account for a significant share of company costs, as well as household expenditures. In Europe, each person spends an average of €1900 (~US\$2350) on transport per year, which represents 13% of their total expenditure (Serafimova 2020). MaaS¹ (Mobility-as-a-Service) and personalized mobility could enable transport users to optimize their expenditures.

Progress is still short of the SDGs and Climate emergency goals.

The transportation sector accounts for 30% of total final energy consumption and is responsible for 24% of direct CO₂ emissions (Teter, Tattini, and Petropoulos 2020). Due to the effects of COVID-19, global energy-related CO₂ emissions are set to fall by almost 8% in 2020 (IEA 2020b). However, such impacts might be short-lived. Indeed, to put transport efficiency on track with the SDGs, energy intensity must drop by 3.4% on average annually from 2019 to 2030. The growth of renewables consumption in the transport sector lags far behind the potential that is required to reach the SDG target of 7.2 (IRENA 2020b). The post crisis period represents an avenue to build a more sustainable future through green recovery.

1. MaaS is a service model that enables customers to plan and pay for their journeys using a range of services via a single customer interface, such as a mobile phone app. MaaS enables customers to access integrated, easy-to-understand journeys in a broad market of transport services that gives them more choice in how they travel.

Availability of financial resources

The worldwide economic shock caused by the COVID-19 pandemic is having widespread and often dramatic effects on investments in the energy sector. Of the G20 countries, Japan has taken the most drastic fiscal stimulus measures in 2020. Saudi Arabia has taken the most significant steps in the opposite direction (Atlantic Council 2020). Mobilizing the required financial resources is a challenge, but also an opportunity for increasing private sector engagements and unlocking climate financing while addressing the economic crisis.



PROPOSAL

While the COVID-19 pandemic has unveiled systemic and structural flaws and challenges, it also presents an invaluable opportunity to rebuild with better and stronger policies that ultimately strive for sustainable transport systems. This policy brief provides the following proposals for policy frameworks that position energy efficient and low-emissions transportation as a means of achieving green and sustainable mobility and avoiding business as usual in the post-pandemic phase.

Proposal #1: Upscale energy efficiency and transportation infrastructure by strengthening the implementation of low-emissions, energy efficiency, and energy conservation policies and regulations.

As countries begin to lift their lockdowns, it will be important to remember how people responded in previous crises. Signs are already emerging that some degree of switching to more energy-intensive transport modes is likely. Policy makers need to learn from previous health crises linked to SARS, H1N1, and Ebola viruses, and even the Spanish flu in the early 20th century. After each of these events, there was a robust rebound of transport demand after the disruptions. Planned reductions in passenger density to reduce the risks of community transmission of diseases could significantly change how many travel services are offered. Furthermore, the COVID-19 pandemic has embedded consumption habits in the transport sector that might be difficult to change due to health and safety concerns (Dubois et al. 2019).

In addition, energy efficiency investments may fall by over 12% in 2020, mostly due to the 6% assumed decline in global economic growth. This could also be in response to less available capital for efficiency projects and lower energy prices, especially for oil (IEA 2020c). In addition, even before the crisis the transport sector is considered to be the most energy intensive. To meet projected mobility and freight demand while reversing CO₂ emissions growth, low-emissions, energy conservation, and energy efficiency measures will need to be deployed to maximum effect. Consequently, governments can influence which transport behaviors become permanent after the crisis and put in place adequate incentives through economic stimulus packages to ensure sustainable recovery of the transport sector. Below are some policy instruments to be considered:

- **Support active transport modes**, such as cycling, which offer considerable social, environmental, and economic benefits. These include greater safety and equity; less noise, congestion and air pollution; and better health and quality of life. The cycling sector can also create jobs across multiple industries. In Europe, cycling employed around 650,000 people in 2016 in areas such as retail, manufacturing, and bicycle tourism (Sung and Monschauer 2020). Policy instruments could include:

- **Provide dedicated cycling and walking infrastructure** and, where feasible, converting temporary infrastructure into more permanent structures to ensure that positive behaviors induced by the crisis will continue. For instance, Oakland has converted 10% of its streets into “slow streets” closed to motor traffic. Other cities such as Milan, Paris, Rome, Brussels, Berlin, Budapest, and Bogotá are widening sidewalks to safely accommodate more pedestrians and cyclists (Sung and Monschauer 2020).
- **Investing in bicycle parking** could have positive economic benefits in the wake of the pandemic. Evidence suggests that bicycle parking infrastructure delivers five times higher retail spend than the same area of car parking. In New York, the implementation of separated bike lanes has increased trade at local businesses by up to 50% (Sung and Monschauer 2020).
- **Include positive incentives to drive greater uptake for active transport modes**, such as creating traffic rules prioritizing cyclists and pedestrians in shared road spaces, especially at crowded junctions. Rebates can also be provided to cyclists for every kilometer cycled into work. For instance, in the Netherlands, where cycling rates are the highest in the world (Harms and Kansen 2018), cyclists can claim €0.19 for every kilometer cycled to work. In response to the COVID-19 crisis, the French government announced a Sustainable Mobility Package. This provides up to €400 per year (Monde 2020; Sung and Monschauer 2020), tax free, for employees who can prove the use of sustainable transport modes, including car-sharing and cycling.
- **Pursue interventions that would remove cheap but energy-intensive options** from travelers’ decision-making entirely. Policy initiatives could benefit high-speed rail, for instance, by allocating stimulus funding to new lines that could be quickly opened to serve corridors among major cities. Governments could also tie airline bailouts to restrictions on short distance domestic segments already served by high-speed rail. For example, the French government recently announced that bailouts for Air France would be contingent on the airline ceasing to provide domestic flights for trips that could be completed by train in under 2 hours and 30 minutes (IEA 2020a).
- **Provide preferential support for efficient vehicles in rapidly deployed economic stimulus plans to help shore up economies and moderate spending declines.** This could involve **applying differentiated taxation schemes that target climate performance outcomes** at the point of vehicle purchase and/or circulation. This

could incentivize vehicle makers to provide more efficient technologies and consumers to purchase cleaner, more fuel-efficient cars (German and Meszler 2010). For example, conditional automaker bailouts linked with subsidies for electric and hybrid vehicles (France) or with vehicles' environmental performance (Italy) can help stem the immediate impacts of the crisis while encouraging manufacturers to manage the transition to electromobility (IEA 2020a).

Proposal #2: Integrate behavioral and perception changes due to COVID-19 in future policies and employ agile mobility networks that leverage an effective public-private partnership to yield a sustainable transport system.

The Mobility-as-a-Service (MaaS) concept is recently becoming popular among policy makers and the industry. It has the potential to improve the overall efficiency of the transport system by incorporating customer preferences, which reduces reliance on private cars in urban areas. Moreover, MaaS can contribute to the reduction of both CO₂ emissions and pollution. While the COVID-19 pandemic has created extraordinary challenges for the whole transport sector, it has also highlighted the importance of an agile and resilient transport system to ensure an uninterrupted supply of goods and people. As a direct impact of the crisis, transport users have already started to cope with their new travel and working habits, and companies expand their functionality beyond transporting people to deliver medicine and food. Companies also have shown their willingness to share data to help evidence-based government policies and decisions in response to the pandemic.

Thus, since MaaS can serve a diverse set of needs, it will be resilient and sustained because of its simultaneous ability to transport people and goods during a pandemic, an environmental disaster, or other situations. Due to MaaS's ability to balancing the mobility of supply and demand, MaaS operators can optimize the use of transport infrastructure and the overall efficiency of the transport system. This, in turn, translates into ample socio-economic and environmental benefits, including the reduction of congestion, higher productivity, lower emissions and better air quality, fewer traffic accidents, and a smaller urban footprint for parking.

Traditionally, urban local authorities are responsible for urban mobility policy. However, the experience with MaaS points to a growing role for the private sector, namely innovative car and ride-sharing companies as well as e-scooter providers. Therefore, new governance structures involving both the public and private sectors are needed for the success of MaaS schemes (Andouin and Finger 2019). Because of MaaS's multimodal nature, it can provide alternative ways of moving both people and goods, from public transportation to taxis and rental services to micro-mobility. It can there-

fore efficiently enhance the flexibility and reliability of the mobility network and the community (Sochor, Strömberg, and Karlsson 2015). To gain these benefits, a strategic integration of physical infrastructure should facilitate the seamless transfer between transportation services, such as bus and rail interchanges, or bike and car sharing spaces at stations.

Proposal #3: Promote proactive policies that encourage the uptake of green energy use for sustainable transport by scaling up green technology advancement and investment.

The visible decrease in greenhouse gases during COVID-19 has emerged as promising evidence of the potential for transport sector sustainability and the uptake of green energy. In addition to climate advantages, green energy can serve as a major engine of post-COVID-19 pandemic economic revitalization and job creation at a time of record unemployment and impending recession. Green energy could make heavy gains as part of any potential post-COVID-19 clean energy recovery package. This includes programmatic initiatives linked to different dimensions of building back better or focus on green economy, innovation, and rebuilding low carbon and climate resilient economic sectors, including the transport sectors.

The high dependence on fossil fuels in the transport sector would be a real challenge for the uptake of green energy, particularly during a period of low oil prices, which could make renewable energy projects less attractive for private sector investment. G20 countries must therefore uphold their joint COVID-19 commitment to support an environmentally sustainable and inclusive recovery and build more resilient future (G20 Saudi Arabia 2020). They should implement proactive policies and regulatory frameworks that scale up investments through economic stimulus packages that can address these challenges. Some suggestions include:

- Promote enhanced technological development for green energy production from various sources of renewable energy to achieve commercially viable costs. This could involve the establishment of R&D funding to develop and scale-up clean technologies that can accelerate the uptake of renewable energy across different segments of transport value chains.
- To support a green transition, research and innovation are key as they increase support across the value chain, addressing challenging sectors such as shipping and aviation. They also include a systemic approach where technology development is combined with innovations in business models, changes to operations, and innovative approaches to policy and mar-

ket design (IRENA 2020a). Thus, G20 countries need to **create robust policy support and innovation to reduce costs and scale up renewable energy technologies**. These must be suitable for aviation and marine sectors and ensure extensive sustainability governance to complement higher biofuel output. For example, cellulosic ethanol and biomass-to-liquid (BtL) synthetic fuels are important as they can be produced from feedstocks that are not used for food and have higher availability and potentially lower cost in G20 countries. These include municipal solid waste as well as forestry and agricultural residues. Such wastes have increased during the COVID-19 pandemic and need to be treated in sustainable way.

- G20 countries need to **strengthen multilateral and regional collaboration** in access to technologies and sharing of best practices that enhance trade policies through integrated collaborative actions to respond to future crises. This could involve using the G20 as a platform to share best practices on green technologies and business models which have proven their efficiency at national levels.

Proposal #4: Make finances available for green recovery in the transport sector by implementing regulatory measures that stimulate private sector participation.

Although governments have responded to the impacts of COVID-19 through socio-economic response plans, but these should not be immediate, short-term actions; the link to longer term sustainable development needs to be clear. This will ensure linkages between the immediate response and a “better” recovery and will enable a smooth transition back to regular operations following the crisis. Moreover, to achieve net-zero emissions by 2050 in pursuit of the 1.5°C goal, countries need to step-up their efforts by mobilizing green recovery financing to accelerate climate actions.

In this respect, G20 countries need to use the opportunities within COVID-19 economic recovery stimulus packages which could constitute the framework for accelerating greening the economy, including sustainable mobility to revitalize the transport sectors. This could be done by introducing **de-risking instruments and direct financial incentives that are granted only to operators who prove they are making efforts to scale up the adoption of low-carbon technologies and fuels**. The following policy options could permit scaling up of finance and investments for sustainable energy:

- **Raise ambitions on renewable energy and energy efficiency targets in transportation sector through enhanced nationally determined contributions (NDCs)** and align standards with climate pledges to curb transport emissions growth. This needs to integrate the dual objectives of sustainable

energy (SDG7) with climate objectives (SDG13) into national transport sector urban planning and regulation. This could further attract the private sector to invest in sustainable solutions and help to benefit from climate financing frameworks and facilities. Such experiences usually involve engaging in a fruitful dialogue with international financial institutions to explore ways to align investment incentives with the objectives of the SDG7 and SDG13 targets. They solicit the participation of development banks and the commercial banking sector in creating specialized credit lines, credit guarantees, contracts, and other products required to service the unmet financing needs of clean energy programs' implementation schemes. Some of the existing best practices within the G20 countries involve the development of public or public-private partnership structures allowing an upscaled deployment of clean energy technologies.

- **Redirect finance planned for conventional energy systems for the mobilization of sustainable energy technologies.** For instance, subsidy swap by reallocating some of the savings from fossil fuel subsidy reforms to fund the green energy transition, such as reinvesting the saved funds in subsidizing electric vehicles (EV) purchases. This mechanism already exists in India, Indonesia, Zambia, and Morocco (Bridle et al. 2020). In fact, the COVID-19 pandemic is an opportunity to **remove pre-tax energy subsidies and link domestic fuel prices to international prices** while international prices are still low. Governments can also include **tax incentives** and transfers to consumers or manufacturers to reduce purchase prices and Non-purchase incentives such as lower road taxes or parking fees

Establish green loan guarantees, tax breaks and tax exemptions, among other fiscal instruments, to encourage startups and small businesses to invest in green technologies and developing solutions for recycling EV batteries. This can demonstrate examples of innovation through successful business models that can create jobs and advance charging infrastructure for EVs. However, to ensure the effectiveness of policy instruments, governments need to **require any company receiving direct government financial support to establish a clear sustainability plan** for its products and operations. For example, no airline or car manufacturer should receive “bail-out” funding without providing a comprehensive plan for significantly reducing the emissions intensity of its operations and product lines.

Disclaimer

This policy brief was developed and written by the authors and has undergone a peer review process. The views and opinions expressed in this policy brief are those of the authors and do not necessarily reflect the official policy or position of the authors' organizations or the T20 Secretariat.



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AUTHORS

Radia Sedaoui

Economic Commission of Western Asia (UN-ESCWA)

AHM Mehbub Anwar

King Abdullah Petroleum Studies and Research Center (KAPSARC)

Farhina Pasha

University of Tabuk

Aishah Alatawi

University of Tabuk

Steven Griffiths

Khalifa University

