22 August 2022

Response matrix for Low emission transport Sectoral Guide

Summary

The accompanying sector guide was released for consultation in November 2021 and the consultation was open until the end of March 2022 (extended) to provide sufficient time for stakeholder to provide inputs. Consultation was open to the Board, advisers, observers, NDAs, Direct and International Access Entities, Civil society, Private sector representatives, Partner institutions and sector experts. The Secretariat received more than 160 specific comments and feedback on this draft. These and the responses by the Secretariat sector experts on how these comments were considered in the updated version of the sector guide is contained in this document.

This feedback and response matrix has been prepared for information purposes only to share the different comments received by the organizations that submitted feedback to the GCF in response to the public consultation of the "Low emission transport Sectoral Guide" draft for consultation version 1.

The information and content in this document do not imply any judgment on the part of GCF concerning the legal status of any territory or any endorsement or acceptance of such boundaries.

Responses to feedback noted here are those of sector experts and may not necessarily be those of the GCF.

The mention of specific entities, including companies, does not necessarily imply that these have been endorsed or recommended by GCF.

For further inquiries regarding this feedback and response matrix please contact us via: sectoralguides@gcfund.org

Sectoral Guide Section	Feedback (verbatim)	Organization	Response from GCF/DMA sector specialists
General	The issue related to freight and urban logistic could be more addressed. The possible contributions of decentralised cooperation or of some networks linking local authorities could be mentioned. It enables experience and knowledge exchange, expertise on projects, contribution to their elaboration and implementation, training, sharing of good practices, etc.	International affairs mission Officer/ Mobility Department/ Cerema	Thank you - the relevance of decarbonization viz. urban logistics and freight sectors is captured indeed under the ZE fuels pathway. The general relevance of freight sector actions is reiterated throughout the document.
General	We think that there could be value added through closer coordination of this work with other initiatives happening in the space. This would help GCF funds to go further and reduce risks of duplication. For instance, it would be useful to understand if this work could have any overlap or potentially link up with that of the World Bank's new Global Facility to Decarbonise Transport (GFDT). We would suggest adding GFDT into the section on 'complementarity and coherence' (page 27).	GCF Advisor	Thank you - followed up accordingly in referred-to section on complementarity and coherence.
General	The GCF Draft Sectoral guide "Low emission transport" is an excellent document, very comprehensive, well formulated and well documented. The guide proposes a strategy on the 3-pronged approach Avoid, Shift and Improve. 1. Avoid, i.e. reduce or avoid the need to travel 2. Shift, i.e. shift to or maintain low emission transport modes 3. Improve, i.e. improve the energy efficiency of existing transport technologies. However, the guide is articulated around three different interlinked pathways: (1) accelerating the shift to public transport; (2) rapidly electrifying the transport system; and (3) supporting scale up of new generation zero emissions fuels. The first two pathways are necessary and welcomed. For the people's mobility, public transport should always be a priority, especially in urban areas. To decarbonize mobility, switching to electricity - when electricity is produced through decabonize means- is now widely recognized as a sound strategy. I am less convinced by the third pathway ("scaling up new generation of zero emissions fuels"). There exist lots of R&D efforts to explore and validate zero emission fuels via agrofuels, syngas or hydrogen. The cost effectiveness and the environmental benefits are not always positive in terms of GHG balances. I would rather see in a such GCF guideline, some encouragements to promote specific policies that have already proven their efficiency when implemented with care like vehicles energy performance policy. Vehicle fuel economy is important for reducing CO2 emissions from transport, as there is a close relationship between emissions and energy used. The Global Fuel Efficiency Initiative (GFEI) is an example a successful programme supported by the Global Environment Fund. Similarly, the Transport Task Group (TTG) coordinated by the ICCT was established in 2014 to serve as a voluntary platform for G20 countries to share experience and work together to improve the energy and environmental performance of motor vehicles, especially heavy-duty vehicles (HDVs). With more financial support for instance from the GCF, the scope and impact of the GFEI and the TTG could be wider. Heavy Duty Vehicles and cars evolved on regional or sometime global markets. International collaboration among national governments to coordinate action to promote cleaner, more energy efficient vehicles. The GCF could set aside a portion of its funding dedicated to transport to support international policy cooperation. Numerous countries are lacking data to properly assess the baseline of their transport sector. International cooperation can accelerate the share of statistical instruments and policy practices to analyse their market.	International Affairs Officer, Directorate-General for Infrastructure, Transport and the Sea	Thank you - with a view to our impact and paradigm shift focus, GCF would indeed strongly prefer to focus on zero emission fuel systems as a third pathway in lieu of a more incremental approach that includes strategic action with concern to fuel efficiency.

General	For clarity, there should be a table or annex that clearly defines what first and second generation biofuels include and exclude. (even if this is simply re-stating agreed upon definitions under IPCC or UNFCCC; and if not agreed upon, this should also be stated)	Convention on Biological Diversity	Thank you - this definition is further clarified in table 7 'Selected barriers to supporting scale up of new generation generation zero emission fuels'.
General	There is no mention of the environmental impacts from the increase in lithium mining required to meet the growing demand for electric vehicles.	Convention on Biological Diversity	Thank you - this important point is added to table 5 'Selected barriers to rapidly electrifying transport systems'.
General	For more information the impacts of mitigation efforts on biodiversity, see: - https://www.cbd.int/doc/publications/cbd-ts-86-en.pdf	Convention on Biological Diversity	Thank you for your comment. The guide has been strengthened with regards to reference to biodiversity & ecosystems risk.
General	The sectoral guide does a good job of outlining priorities for action and investment criteria to support developing countries to effectively transition to low-carbon transportation. This is a welcomed step as carbon emissions from transport represent nearly a quarter of global Co2 emissions. However, a wider feminist lens needs to be provided to the document overall as access to transport and needs affect men and women very differently.	Policy Analyst/Advisor to the GCF	Thank you - the guidance addresses primarily questions and strategies of transport decarbonization neutral of gender aspects. It stands beyond a doubt that fleet and infrastructure renewal as a consequence of (but separate conceptually from) transport system decarbonization offers opportunities for better gender equality in transportation.
General	Low-emission mobility taking Europe into consideration Transport represents almost a quarter of greenhouse gas emissions and is the main cause of air pollution in cities. The transport sector has not seen the same gradual decline in emissions as other sectors: emissions only started to decrease in 2007 and still remain higher than in 1990. Within this sector, road transport is by far the biggest emitter accounting for more than 70% of all GHG emissions from transport in 2014. With the global shift towards a low-carbon, circular economy already underway, the Commission's low-emission mobility strategy, adopted in July 2016, aims to ensure Europe stays competitive and able to respond to the increasing mobility needs of people and goods. The strategy integrates a broader set of measures to support Europe's transition to a low-carbon economy and supports jobs, growth, investment and innovation. Main elements of the strategy • Increasing the efficiency of the transport system by making the most of digital technologies, smart pricing and further encouraging the shift to lower emission transport modes, • Speeding up the deployment of low-emission alternative energy for transport, such as advanced biofuels, electricity, hydrogen and renewable synthetic fuels and removing obstacles to the electrification of transport • Moving towards zero-emission vehicles. While further improvements to the internal combustion engine will be needed, Europe needs to accelerate the transition towards low- and zero-emission vehicles. • Cities and local authorities will play a crucial role in delivering this strategy. They are already implementing incentives for low-emission alternative energies and vehicles, encouraging active travel (cycling and walking), public transport and bicycle and car-sharing /pooling schemes to reduce congestion and pollution.	ASABE SHEHU YAR'ADUA FOUNDATION	Many thanks for your comments and information. Noted and well appreciated.

General	We believe that the guideline is well targeted, but focuses on concrete solutions (public transport, electric mobility and zero-emission fuels). It could be positive to include a fourth more strategic pathway for the paradigm shift towards low emissions bolstering land use and mobility planning. In addition, it could be positive to include reference to cradle to grave planning approaches and to make a distinction between solutions for passenger transport and freight transport.	Ministry of Economy and Digitalisation Spain	Thank you - the implications of the shift to low emissions public transport for land use and mobility planningis duly acknowledged under the first pathway in the guideline. We agree that distinctions between passenger and freight transport need to be made - the guideline does so whereever possible and relevant.
General	From recent experiences we understand GCF has decided no to support equipment acquisition in electric transport systems. One way to accelerate transition of private and public transportation is to reduce end-user prices of electric vehicles, and to support fleet substitution. Motorcycle has become a predominant means of individual transport in developing countries. Targeted actions to reduce demand for this type of individual solutions should be considered and fostered. As it was mentioned at the Water sectoral guide, protection of water sources is critical in tropical developing countries with high dependence on hydroelectric generation.	National Planning Department Colombia	Thank you -replacement of individual modes of transport will still leave unadressed the question of decarbonization of the replacement mode of transport. GCF focuses on elements of the current structure of the transport systems that can be most impactfully addressed to achieve decarbonization.
General	The sectoral guide does not reflect the potentially beneficial role of autonomous transport systems (see e.g., Inglinski, Babiak, 2017). The development of suitable infrastructure could help least developed countries leapfrog technological developments and improve transport efficiency throughout the target countries of the GCF. The technological readiness seems to be given as first vehicle manufacturers have received licenses for level 3 autonomous driving. We suggest replacing the pathway “Supporting scale up of new generation zero emission fuels” with “Supporting scale up of autonomous transport systems”. This change requires coordinated efforts with other sectoral guides such as IT infrastructure, cities, and urban systems. It remains important to uphold the principle of sustainable urban transport “Avoid-Shift-Improve”, meaning that precautionary measures should be taken to ensure that the pathway does not lead to unintended effects, which may ultimately increase mobility to unsustainable levels.	Germany BMZ	Thank you - we acknowledge the signifance of recent advances in autonomous transport systems. The current state of technology development towards truly autonomous transport however falls significantly short of the timeline envisaged for decarbonization of transport systems - meaning a focus on these nascent technologies now means delaying or discarding impact in decarbonizing current transport systems.
General	Against the background of the global trend of urbanization, Switzerland recommends to make a greater use in the document of the term “urban transport system” and “urban mobility” to highlight the growing challenges for low emission transport that exist in functional urban areas.	State Secretariat for Economic Affairs (SECO) Economic Cooperation and Development, Infrastructure Financing	Thank you - the guidance emphasis as a cross cutting issue the importance of a shift to public transport within the urban transport system i.e. towards more collective forms of urban transport specifically as a strategy for decarbonization of the urban transport system.
General	It is also recommended to mention the opportunities to link low emission transport agenda with benefits for climate adaptation, e.g. by climate proofing critical transport infrastructure, enlarging road drainage capacities and include green space for flood water retention, particularly in urban settings	State Secretariat for Economic Affairs (SECO) Economic Cooperation and Development, Infrastructure Financing	Thank you - we retain the focus on low emission transport.

General	Add a general paragraph regarding the eligibility of biofuels: no negative impact on food supply and food security (excluding first generation biofuels in particular); limited to not-yet electrifiable uses.	French ministry of the ecological transition	Thank you - this is further clarified in table 7 'Selected barriers to supporting scale up of new generation generation zero emission fuels'.
General	Switzerland commends the GCF for the well structured and well referenced sectoral guide on Low emission transport.	State Secretariat for Economic Affairs (SECO) Economic Cooperation and Development, Infrastructure Financing	Thank you for the comment. Agreed.
Executive Summary	Cross-Sectoral issues regarding cities, buildings, and urban systems: we could add another point on EV charging points in car parks in residential and non-residential buildings.	Ministry of Economy and Digitalisation Spain	Noted, text added
Executive Summary	Cross-Sectoral issues regarding cities, buildings, and urban systems: we could include reference to Transit Oriented Development embedded with urban planning.	Ministry of Economy and Digitalisation Spain	Noted, text added
Executive Summary	Cross-Sectoral issues regarding ecosystems and ecosystem services: There is an opportunity to reduce the fragmentation of ecosystems due to transport infrastructure through better design and planning, wildlife crossings, etc.	Ministry of Economy and Digitalisation Spain	Noted, text added
Executive Summary	Cross-Sectoral issues regarding ecosystems and ecosystem services: We can highlight synergies between mitigation and adaptation. For example, cycling or pedestrian paths present an opportunity to join nature-based solutions.	Ministry of Economy and Digitalisation Spain	Noted, text added
Executive Summary	Health and wellbeing: we could add another point on Health issues related to non-motorised transport, pedestrianisation, healthier routines for citizens, reducing urban congestion and stress or lowering traffic fatalities.	Ministry of Economy and Digitalisation Spain	Noted, text added
Executive Summary	Switzerland agrees with the relevance of the three paradigm shifting pathways proposed. Although the sectoral guide does not provide justification for them against alternative foci, the three pathways reflect a comprehensive approach of transport systems and are mutually reinforcing.	State Secretariat for Economic Affairs (SECO) Economic Cooperation and Development, Infrastructure Financing	Thank you for the feedback. Have augmented text to include "They reflect a comprehensive approach of transport systems and are mutually reinforcing".
Executive Summary	The principle of sustainable urban transport “Avoid-Shift-Improve” is a general principle that is applied throughout different sectoral guides (incl. low emission transport, cities, buildings, and urban systems). The principle should ensure that GCF funds prioritise projects that avoid unnecessary mobility. If this is not feasible, GCF funds should support a shift to low carbon alternatives (e.g., public transport, cycling, walking). Only in those occasions, in which avoidance and shifts are not possible, GCF funds may support improvements in existing infrastructure to, inter alia, reap efficiency gains. In line 36, it is stated that the sectoral guides for cities, buildings, and urban systems cover the “Avoid” aspect to a large degree, while it plays a minor role in the low emission transport guide. However, from the low emission transport sectoral guide, it does not become clear how and to what extent those sectoral guides cover the aspect, i.e. the complementarity of the sectoral guides is not transparent. As a result, it is difficult for the reader to retrace the sequential application of the principle and thus to be assured that “Avoid” is prioritised wherever possible. We recommend (a) to develop a supplementary document on the matter and/or (b) to include explanatory text in all relevant sectoral guides.	Germany BMZ	Thank you and it is elaborated in appropriate sections of the guides.
Executive Summary	Organisational aspects and planification tools such as SUMP should be mentioned. The existence of an urban mobility Authority is an important point. The question of the coordination of the multiple actors involved in public transport is often a major concern. It’s often difficult to consider public transport as a whole.	International affairs mission Officer/ Mobility Department/ Cerema	Thank you for your comments and agreement. Still need to include a reference elsewhere for the urban mobility authority and public/private actors. We have added reference to SUMPS elsewhere in the document.

Executive Summary	The sectoral guide describes “Supporting scale up of new generation zero emission fuels” as one pathway for meeting the sustainability goals. The suggested technologies include hydrogen and second generation zero emission biofuels. Those technologies will most likely support the decarbonisation of specific parts of the transport system. Advanced biofuels will mostly help decarbonising the aviation industry and to some degree road/rail logistics (IEA, 2021). Hydrogen will have a significant role in decarbonising shipping and a secondary role in decarbonising aviation and road transport (ibid.). Both technologies will mostly become relevant for their sub-sectors post-2030 and will in the meantime remain relatively expensive. Green hydrogen is energy intensive compared to other technologies (e.g., direct electrification). As such, it could put additional burdens on the decarbonisation of electricity systems. In order to reflect the relatively low importance and application of those technologies in the 2020s, in particular in developing countries, and the persisting technological challenges, we suggest to remove the pathway “Supporting scale up of new generation zero emission fuels” and presented it as a measure of last resort under the pathway “Rapidly electrifying transport systems”.	Germany BMZ	Thank you - it is strongly believed that recent scaling in (to take one of the examples) green H2, H2 fuel cell electric vehicles and its applications justify the inclusion of zero emission fuel pathways not only for developed countries but also for emerging markets. GCF therefore would favor very much to retain this as a distinct pathway especially in the second pillar of GCF Strategic to support early-stage non-commercial technology with future scale up potential.
Executive Summary	Please add a statement that the GCF intends to support green hydrogen projects only and excludes any projects with links to blue or grey hydrogen. Otherwise, there is an increased risk of fossil fuel infrastructure lock-in under the use of GCF funds.	Germany BMZ	Thank you - we are in agreement with the point that is raised by your question: the guideline is clear that hydrogen energy platforms that are not based on green hydrogen do not result in sufficient decarbonization impact. (see table 7 'Selected barriers to supporting scale up of new generation generation zero emission fuels')
Executive Summary	Derivatives of hydrogen (e.g., synthetic fuels and ammonia) will most likely have a more relevant role for transport than pure hydrogen (IEA, 2021). Please discuss this forecast in the sectoral guide.	Germany BMZ	Thank you - This would be subject to consider in future afetr rolling out this sector guide.
Executive Summary	It is important to include that biofuel cultivation, such as on peatlands and natural grasslands, may pose significant risks for biodiversity. This third pathway should contain biodiversity safeguards in order to refrain from conflicting with other GCF sector guides.	Convention on Biological Diversity	Thank you, this has duly been incorporated under the 'Barriers to achieving paradigm shift' heading.
Executive Summary	Will the GCF also consider sustainable synthetic fuels (beyond sustainable biofuels)?	Swiss Agency for Development and Cooperation (SDC)	Thank you - This would be subject to consider in future afetr rolling out this sector guide.
Executive Summary	Risk depicted as “exceptionally high” might be a bit of an exaggeration: upfront capital costs are higher but total cost of ownership is already lower (e.g. for battery-electric vehicles), and prices will continue to decrease	Swiss Agency for Development and Cooperation (SDC)	Thank you for the suggestion. The text has been edited.
Executive Summary	“Lack of sufficient funding and financing” : could you break this down more specifically (e.g. is the main issue lack of funding in general or lack of adequate financing schemes to cover the specificities of zero emission vehicles, such as higher upfront costs?)	Swiss Agency for Development and Cooperation (SDC)	Thank you - this has been clarified in the corresponding section.
Executive Summary	An additional barrier for many private investors to investing in infrastructure projects of target countries is the volatile political environment.	Germany BMZ	Thank you for your comment. We believe this point is made within the text already when we refer to 'lack of political support and continuity over time'.

Executive Summary	Among barriers, subsidies for fossil fuels are not listed but can also reduce the competitiveness of emission-free alternatives. Missing is also possible opposition from some groups that may fear loss of jobs or revenues from reforms to the transport sector (e.g. informal operators)	Swiss Agency for Development and Cooperation (SDC)	Thank you for the comment. The text has been adjusted to include those 2 points.
Executive Summary	Add the fact that negative externalities are not factored into the price of current transport systems (e.g. the costs of air pollution)	Swiss Agency for Development and Cooperation (SDC)	Thank you for the suggestion. The text has been edited.
Executive Summary	Please specify the meaning of underperformance of new technologies. What is the point of comparison?	Germany BMZ	Thank you for your comment which we appreciate. We would point out that the underperformance of new technologies should be viewed predominantly in the context of more recent transport solutions which have either taken longer to reach proof of concept than was originally anticipated or remain underperforming in the wider context (such as automous vehicles, low pressure tube transport, development of emission free plane engines, distributed energy, etc). This can also include disruptive digital technologies which may presently still be in the process of changing modal shift behaviours in certain geographical regions (Car sharing, ride sourcing apps, multi-modal journey planning apps, autonomous and shared mobility compatibility). We have changed the text to refer more specifically to the timely performance of new transport technologies and solutions.
Executive Summary	Synthetic fuels are absent in this section but could be included (incl. currently high costs)	Swiss Agency for Development and Cooperation (SDC)	Thank you for the comment. The text has been adjusted to include syntechic fuels.
Executive Summary	Biofuels can compete with food supply but also link to major deforestation, destruction of biodiversity, water consumption. They can also be produced by a non-sustainable agriculture using lots of fertiliser and pesticide. As for electric power the way biofuel is produced is a major concern	International affairs mission Officer/ Mobility Department/ Cerema	Thank you for your feedback. The text in Table 7 has been strengthened to include this feedback.
Executive Summary	Switzerland agrees with the comparative advantage identified for GCF in catalyzing climate innovation by de-risking investments from the public and private sectors through the array of instruments listed in chapters 4.5.1. to 4.5.7	State Secretariat for Economic Affairs (SECO) Economic Cooperation and Development, Infrastructure Financing	Thank you for the comment. Agreed.
Executive Summary	The integration of planning and programming should also reflect initiatives with a pan-national scope (e.g., the Belt-and-Road initiative and the EU's global gateway" initiative) due to the high impact potential.	Germany BMZ	Thank you - mention of the relevance of cross-national initiatives and programs has been added accordingly.

Executive Summary	It's important to program and finance infrastructures for cycling and walking and to enhance the existing one for more comfort and safety	International affairs mission Officer/ Mobility Department/ Cerema	Thank you for your comment. The text has been augmented to include mention of programming and financing infrastructure for for cycling and walking.
Executive Summary	Ecosystem-based approaches and other synergistic nature-based solutions that include biodiversity safeguards should be prioritized over quick-fix solutions for their co-benefits toward other sustainable development issues.	Convention on Biological Diversity	Thank you and agreed - attention to the adverse impacts on biodiversity is reiterated throughout the guideline.
Executive Summary	Reference to "For renewable power generation" – should this not relate to transport?	Swiss Agency for Development and Cooperation (SDC)	The section has been adjusted accordingly.
Executive Summary	The last part of the paragraph starting with "For renewable power generation,…" appears to be out of context and would rather fit in the sectoral guide for energy.	Germany BMZ	The section has been adjusted accordingly.
Executive Summary	In transportation, especially forelectrification of public transportation fleets, the approach must be the same but with TCO, since the entry barriers and incrementals tend to have the same conditions as with renewable energies.	GIZ	Thank you for your feedback. The text has been refined to include reference to TCO and entry barriers.
Executive Summary	Reference to "in the renewable energy sector" – should this not relate to transport?	Swiss Agency for Development and Cooperation (SDC)	The section has been adjusted accordingly.
Executive Summary	It's important to assess benefits, co-benefits but also inconveniences. Take care of the transfers from one dimension of ecological foot print to another one!	International affairs mission Officer/ Mobility Department/ Cerema	Thank you for your comment. The text has been strengthened to incorporate this feeback. Please note that given the context and scope of the sector guide we are unable to expand further on transfers from one ecology footprint transfers, however the text elsewhere has also been strengthened to incorporate ecology and ecosystems considerations.

Executive Summary	It's noteworthy that this should be a starting point for broad capacity development programmes as a part of GCF interventions.This is because 'what is really holding us back' - it is not only the lack of awareness, vision, plans or strategies, not even the lack of good examples. There has been quite a considerable development here, both at national, international and local level, over the last two decades. What is holding us back - and this has been going on for some time in the debates, but we are not finding the sufficiently large lever of change - is in many cases multi-dimensional lack of real implementation capacities and mechanisms. - There is a lack of personnel to shape and drive change processes in the field of transport - we estimate that there is a shortage of 1.6 million transport planners and related professions worldwide. - There is a lack of modern regulations - on the contrary, there are many outdated, contradictory or fossilised standards and regulations, which can often be traced back to the original Highway Capacity Manual (HCM) and similar works and thus to the idea of the free flow of motorised transport. These sets of regulations are often very small-scale, very detailed and very extensive. And very hidden, often only known and understood by technical staff - detailed technical understanding is needed for reform to take substantial steps forward here. - There is a lack of modern professional associations - the existing professional associations (if they exist at all) are rarely drivers of modernisation, often transport-oriented exchange formats without reference to goals such as climate, sustainable urban development or they are even traditional associations in the sense of historical preservation and display of means of transport. - There is a lack of ambitious, scalable education and training programmes in the field of transport; there is a complete lack of success in comprehensively modernising academic education in the field of transport on the one hand and in reaching significantly more students or addressing neighbouring fields of education on the other (e.g. graduates of urban planning, civil engineering, etc.). In many countries, path dependencies and networks that have grown over decades, which shape the shape of transport and prevent an ambitious modernisation and alignment of the sector with the goals of sustainable development - a kind of deep state that largely eludes political discourse and is rarely organised according to democratic principles	GIZ	Thank you for your detailed remarks, this is well noted and we agree.
Executive Summary	It's important to finance the implementation of the infrastructures dedicated to active modes.The re-fit of existing vehicles could be a way to explore for a faster shift from fuel powered vehicles to cleaner ones. New industrial sectors are to be developed (from recycling, building to repair) and workers from the old ones must be must be trained to work in the new ones.	International affairs mission Officer/ Mobility Department/ Cerema	Thank you for the comment. Agreed.
Executive Summary	Same comments above apply to the table, respectively.	Convention on Biological Diversity	Thank you for the comment. Agreed.
Executive Summary	Aviation and shipping seem underrepresented in the matrix. Those sub-sectors would require increased attention if the pathway “Supporting scale up of new generation zero emission fuels” is to remain, as the two sub-sectors have the highest relevance for the pathway. In case “Supporting scale up of new generation zero emission fuels” is to be removed, the current representation of the two sub-sectors would be coherent.	Germany BMZ	Thank you - generally agreed to. We are considering to expand our portfolio to shipping and aviation subsectors in future.
Executive Summary	A potential addition to the box in the matrix at the crossroad of “Transformational planning & programming” and “Accelerating shift to low emission public transport” could be: Increase convenience of public transport (incl. frequency of service, amenities, in-transit service). More convenient public transport systems generally lead to higher satisfaction and thus to higher uptake of the respective system.	Germany BMZ	Thank you for the comment. Agreed.

Executive Summary	A potential addition to the box in the matrix at the crossroad of “Catalyzing climate innovation” and “Rapidly electrifying transport systems” could be: Develop a circular economy model for zero tailpipe emission vehicles. This would not only create environmental co-benefits (e.g., reduction of waste, reduced pollution) but would reduce embedded emissions of the transport system in the long run (e.g., due to reduced mining activities).	Germany BMZ	Thank you for the comment. Agreed.
Executive Summary	Please clarify what is meant by “Support additional research for risk reduction” in the box of the matrix at the crossroad of “Coalitions & knowledge to scale up success” and “Supporting scale up of new generation zero emission fuels”.	Germany BMZ	Thank you for the comment. Agreed.
1.1	Competition of biofuels with the agriculture and forest sectors also impact the biodiversity across those affected ecosystems. In addition, there are other ecosystems that are often affected by competition for biofuels, such as peatlands and natural grasslands.	Convention on Biological Diversity	Thank you for your comment, this is duly noted and reference to ecosystems and peatland impact from cultivation has been incorporated elsewhere in the report.
1.1	Each of the three pathways focuses on “Coalitions and Knowledge for Success.” These sections speak to the need to develop institutional capacity (workshops, trainings, exchanges, and communities of practice). It is important that the GCF encourage applicants to apply a gender-sensitive approach to these activities to ensure that cultural norms are addressed so that women and girls can effectively be at the centre of planning and solutions.	Policy Analyst/Advisor to the GCF	Thank you for the remark, this is well noted. However it is beyond the scope of this report to specifically encourage applicants to apply a gender sensitive approach.
2.1	This is the BAU scenario it is not „set to double“. Reducing transport demand (e.g.) by more efficient logistics or more compact cities is a mitigation strategy.	GIZ	Thank you for the comment. The text has been adjusted to reflect the suggestion.
2.1	it can be argued that 'access' and not mobility is the right concept here. To give access to health care one could (a) provide a transit line or (b) bring a doctor to the village.	GIZ	Thank you for the comment. The text has been adjusted to reflect the suggestion.
2.2	This can be updated using the new analysis of NDCs released for COP26: https://changing-transport.org/wp-content/uploads/GIZ-2021.-Key-insights-Transport-in-NDCs-and-LTS-2.pdf	GIZ	Thank you for your feedback. The text has been augmented to include this reference.
Section 2.2	Missing here is the fact that many countries (especially LMICs) are confronted to heavy air pollution (with very significant health and economic costs), with transport being one of the main contributors, especially in urban areas, due to highly polluting vehicles with low emission standards and poor fuel quality. There is therefore an interest for LMICs to quickly transition to clean transport to reduce the burden of air pollution on health and the economy. This dimension should be reflected more strongly, backed by recent references from the literature.	Swiss Agency for Development and Cooperation (SDC)	Thank you - agreed and adjusted in the text to reflect this particular aspect more aptly.
2.2	What about freight transport?	GIZ	Clarified that this concerns public transport. More generally, freight transportation is addressed under pathway 1 (shift to rail) and pathway 3 (scaling up of low emission fuels).
Section 2.3	There is no mention of direct targets under adaptation/resilience. The section only talks about indirect benefits due to mitigating decarbonisation measures. The sectoral guidance should discuss adaptation needs to help AE develop projects and be able to deliver on those adaptation targets.	Asian Development Bank	Thank you - The section addresses sector adapation needs in a contextual way.

2.3	ITF, 2021: interesting and impressive figure. Tell us more!	International affairs mission Officer/ Mobility Department/ Cerema	Kindly refer to (see source reference list) International Transport Forum (ITF). (2021). ITF transport outlook 2021. https://www.oecd-ilibrary.org/sites/16826a30-en/index.html?itemId=/content/publication/16826a30-en&_csp_=190cc6434d2fccf11e2098c12744cdb5&itemIGO=oecd&itemContentType=book
Section 2.3	The transport sector is one of the major contributors to emissions of the short-lived climate pollutant black carbon (in addition to CO_2), which is also a highly potent air pollutant. This should be referenced in the sections on mitigation.	Swiss Agency for Development and Cooperation (SDC)	Thank you for your comment, the text has been strengthened to include referent to black carbon in the transport sector.
Sections 2.3 and 2.4; Section 3	The document should breakdown challenges per sub-sector, given that they are very different and each face a distinct set of barriers, e.g. public transport; heavy duty vehicles (currently more difficult to transition to battery electric vehicles, green hydrogen as a potential option, etc.); light-duty vehicles; maritime transport, etc. The document throughout but especially under section 3 should have a finer analysis of these sub-sectors, with a more detailed analysis of specific barriers as well as of possible actions. In sum, the document should make it clear what the GCF's strategy for each of these sub-sectors is (given that none seem to excluded). Analysis seems weak in particular for heavy duty vehicles, maritime, freight, rail and aviation. If the GCF will place its focus mostly on public transport and/or road transport, this could be made clearer in the Guide.	Swiss Agency for Development and Cooperation (SDC)	Thank you - the point is well understood. While none of the mentioned subsectors are excluded, it is the ambition for this guideline document to explain GCFs approach as layed out along the 3 pathways which are believed to most impactful and which are cross cutting through the different subsectors.
2.4	Urban logistics and freight transport are very important for GHG emission. Water modes needs major evolutions to begin being less polluting and GHG emitter	International affairs mission Officer/ Mobility Department/ Cerema	Thank you for the comment. Agreed.
2.4	Pathways can be further expanded by adding 'more efficient logistics and shift from road to rail (both passenger and freight).	GIZ	Thank you for your comment. Text included.
2.4	New urbanisation is a global trend and it is timely to add a first pathway for a paradigm shift towards low emissions bolstering land use and mobility planning, including reduction of mobility demands, rethinking our urban models, compact urban growth, smart mobility, low emission zones and transit-oriented developments. The importance of these issues has been highlighted during the coronavirus pandemic.	Ministry of Economy and Digitalisation Spain	Noted, text added.
2.4	Don't forget the question of the coordination of the different public and overall private actors involved in public transport. A public urban mobility authority can be a prerequisite for this coordination To promote cycling and walking appropriate infrastructures are essential. Another way to reduce transport climate impact is to reduce mobility: adequate urban planning, new ways of work (teleworking, , shared offices…) consumption (neighbourhood markets for local producers) and leisure are important and should be developed and financed.	International affairs mission Officer/ Mobility Department/ Cerema	Thank you for your feedback. We feel the coordination between public and private actors has been addressed elsewhere in the document and in this section in particular reference to changing social and leisure behaviours is addressed by the inclusion of 'reducing mobility demands'. Addressing more specific social and leisure behaviours is beyond the scope of this document.
2.4	Pathways I and II - together are the best cost effective options, nonetheless are in most cases more expensive than ICE. It is important to allow for incremental compensation instruments to allow for transition.	GIZ	Thank you for your feedback. The text in sectio 2.5 has been augmented to include this point.

2.4	In the section on transformational planning and programming, it is recommended that, in addition to prioritizing the access and safety of transport for marginalised groups such as women elderly, and children, specific considerations be given to those with disabilities and their transport needs.	Policy Analyst/Advisor to the GCF	Thank you for the comment. The text has been adjusted to reflect the suggestion.
2.4	To rapidly electrify the transport system, the re-fit of existing vehicle could be an interesting solution to develop especially in LICs	International affairs mission Officer/ Mobility Department/ Cerema	Thank you for your comment, this is duly noted and the text has been amended to include the refit of existing vehicles.
2.4	All urban vehicles can be electrified, incl. urban delivery.	GIZ	Thank you for your comment. We consider the urban delivery vehicles to be included in the text description. We have further refined the text to include re-fit of existing vehicles (which includes urban delivery).
2.4	The safeguards mentioned here for "fully sustainable and green value chains that do not interfere with the food supply chain or increase strain on land and water usage" should also include consideration of conservation and sustainable use of biodiversity and ecosystem connectivity.	Convention on Biological Diversity	Thank you for you comment. We fully agree. Text has been include this point.
2.4	These fuels are currently not available in developing countries and won't be available at larger scale in the next 10 years. It's noteworthy that all these fuels will be needed in maritime transport and aviation, as no alternative technologies exist. Therefore, investments should be made in existing vs. more expensive non-proven technologies with caution / through a balanced approach.	GIZ	Thank you for your comment. The text has been adjusted to reflect consideration for a balanced approach regarding existing vs new technologies.
2.4	Sustainable synthetic fuels are not discussed but should be mentioned	Swiss Agency for Development and Cooperation (SDC)	Thank you - This would be subject to consider in future afetr rolling out this sector guide.
2.4	The GCF makes reference to the need for "fully sustainable and green value chains that do not interfere with the food supply chain or increase strain on land, [biodiversity] and water usage or lead to net increased emissions. It is recommended that biodiversity considerations be added as well.	Policy Analyst/Advisor to the GCF	Thank you for the comment. The text has been adjusted to reflect the suggestion.
2.5	It may be useful to update the section with recent studies.	GIZ	Thank you - noted and to be followed up on in new editions of the guideline.
2.5	Add a discussion of the benefits of shifting to low or zero emission transport based on the literature (with benefits relating in large part from the reductions in air pollution, also from more active transport improving health, etc.).	Swiss Agency for Development and Cooperation (SDC)	Thank you - reference to health impacts (in particular in emerging markets/LDICs) is included.
Section 3	Freight is missing/ not considered thoroughly in the guide while it's responsible for 40-50% of emissions. Efficient logistices is very important.	GIZ	Thank you - freight is in fact addressed and captured under especially pathways 1 and 3 where it concerns shift to low emission transport (shift to rail) and scaling of low emissions fuel systems.
Section 3	For consideration: fuel pathway may not be very suitable for developing countries. Investments in freight rail or multi-modal hubs (e.g., rail links to ports) could be more effective.	GIZ	Thank you - as indicated there is a strong rationale for the fuel pathway vis-à-vis the trajectory of motorisation in developing countries - and we see the ncessary potential of bending the trajectory of motorisation away from high carbon emission fuels in developing country contexts.

3.1	As UNDP, we would like to underline the contextual differences between the Middle-Income Countries (MICs) and LDCs-SIDS in terms of barrier analysis and differentiated needs for transitioning to low-emission transport. LDCs and SIDS have slightly different transport demands, transport patterns, and capital absorption and repayment capabilities than MICs, and hence we suggest GCF to define a distinct policy development, training/capacity building and investment strategy for transport sector in LDCs and SIDS. For instance, transport sector investments in LDCs and SIDS (which was worsened by Covid-19 pandemic through lowered demand for public transport) would require a lot more grants than debt/equity investments. At the same time equity/impact investment funds and concessional debt financing via international and domestic funds/platforms may be further encouraged to actively invest in low-carbon transport ventures/start-ups in LDCs and SIDS via GCF's concessional capital and grants. In LDCs and SIDS, the part of the population with low levels of income is larger, and hence, governments try to compensate such economic gaps with low fares/prices in the provision of critical public services, such as transport, which may result in low quality of services. In addition, in such circumstances, the informal transportation plays an important role which can be a barrier for low-emission transport development too. This is important to acknowledge because many of the initiatives to build up more efficient and low emission public transport systems in developing countries may demand regulatory and legal arrangements towards informality and consequentially measures to counter-balance the potential socio-economic impacts on these stakeholders. Given to such specific context of LDSc-SIDS, UNDP suggest that the GCF strategy may seek from Governments to ensure coherence between transport projects with wider actions in the fields of governance, progressive taxation, and provision of other basic public services (health, education, culture, etc.) to ensure successful uptake of transport solutions suggested by the Guide.	UNDP	Thank you - the importance of informal sector transport (dis)organization as a hurdle to lowering transport emissions in developing countries has been emphasized more in accordnace with your observation.
3.1	To overcome the lack of sufficient funding, some financing mechanisms could be implemented such as a contribution of the private sector (linked to the payroll of companies, e.g "versement mobilité" in France), tweaking, parking incomes. All these potential revenues must be dedicated to public transport and managed by a dedicated authority.	International affairs mission Officer/ Mobility Department/ Cerema	Thank you - in agreement and referencing e.g. table 4 •Enact time-bound national policies and strategies that enable transition to low emission public transport. •Enact or revise policies/regulations to empower municipalities to raise investments and revenue streams for a sustainable transition to low emissions, climate resilient public transport.
3.1	TCO + risks are more costly for new technologies. Even if the funding is available conditions must make investments more appealing, especially for public transportation which tend to operate in deficit.	GIZ	Thank you for your feedback. The text in the report has been strengthened to include reference of the investment conditions for new emerging technologies.
3.1	Insufficient planning is not only the core issue, but rather a very profound lack of human and institutional capacities, outdated norms, lack of professional associationss etc.; this goes beyond the scope of individual projects but is relevant of the whole sector. GCF is well positioned (given the size of its projects) to address this in a more comprehensive manner	GIZ	Thank you - as highlighted in the same line indeed, it is not only the planning function as such but also the (underlying) capacity to implement transport projects and services in a balanced and feasible way.

3.1	Important! The set up at the local level of a public agency dedicated to urban planning and perhaps also in charge of public transport planification or a strong coordination between the two agencies (in France: Urban planning Agency and Urban Mobility Agency) is a prerequisite.	International affairs mission Officer/ Mobility Department/ Cerema	Thank you - agreed and clarified as an example of one of the root causes why transport project and service planning may be inadequate.
3.1	Switzerland recommends to consider more explicitly the support to the strengthening of institutional capacities under paragraphs 413 and 383. Particularly in low-income countries, entities such as metropolitan transport authorities are inexistent and municipal transport departments and public transport operators lack sufficient capacities to implement governmental planning and municipal transport strategies. This requires longer term institution building and capacity development going well beyond the “workshops, trainings, exchanges, community of practice groups” listed under paragraphs 413 and 460.	State Secretariat for Economic Affairs (SECO) Economic Cooperation and Development, Infrastructure Financing	Thank you - agreed and clarified the absence of a properly instituted transport authority or dpt as an example of one of the root causes why transport project and service planning may be inadequate.
3.1	The issues is not only the project planning but rather a good overall integrated plan. E.g. SUMPs are a very effective vehicle to identify and agree with stakeholders on an overall strategy and priorities funding streams. See www.MobiliseYourCity.org	GIZ	Thank you for your comments. Text has been augmented to include reference to a good overall integrated plan.
3.1	More expensive than what? The economic costs of highways are usually very high and construction is very expensive.	GIZ	Thank you for the comment. Please note the text refers to 'often'. The wording has been editted to make more explicit mention of the capital costs being higher for low emission projects. Highway construction in isolation is arguably not a low carbon investment and although the cost would be very high, they would likely be higher if low carbon environmentally friendly raw materials were used.
3.1	This section requires a finer analysis. There is increasing private sector investment, especially in electric vehicles. EVs also have distinct advantages (longer vehicle life times, lower maintenance costs) which are not discussed. For public transport and commercial EVs, it would be important to discuss the barriers faced by, for example, smaller, private transport companies and MSMEs (often in the informal sector) that may not have the capital to replace fleets with new, cleaner vehicles (let alone EVs), and later in the document to expand on possible action lines (e.g. structuring adequate financial products, green credit lines, incentives, etc.).	Swiss Agency for Development and Cooperation (SDC)	Thank you - the constraints faced by rather informal operators vs the advantages of EVs over the longer TCO period are now more clearly reflected in line with your comment.
3.1	The cost of inaction may be included in this section on 'risk'.	Convention on Biological Diversity	Thank you for the comment. The text has been adjusted to reflect the suggestion.
3.1	The advent of green financial products led to strong demand in green assets, incl. transport. Usually, investors state that they find insufficient suitable assets. Please provide evidence for the statement that low-emission transport technologies such as electric powered and hydrogen fuel cell vehicles see limited private sector investment.	Germany BMZ	Thank you - the statement is not primilary about limited quantum of private sector investment but rather the willingness to invest at risk. The statement has been qualified by adding that this is particularly true for developing country, informal transport sector contexts. For discussion concerning longer pay back and lower margin business models kindly reference as indicated in the subject lines to ITDP, 2019a; WRI, 2015.

3.1	“This is particularly true for newer and rapidly evolving low emission technologies (such as electric powered and hydrogen fuel cell vehicles) which have limited on-the-ground application and proven business models .” Excessive. At least, precise: for heavy-freight transport?	French ministry of the ecological transition	Thank you for the comment. The paragraph is attempting to describe situations where such business models / applications are perhaps less proven than more conventional ones *because* they are newer / rapidly evolving. Text has been updated to include mention of public transport and heavy freight.
3.1	There is simply no green hydrogen available. Fuel cell vehicles are not only extremely expensive, but they are not mature technology, fully lack infrastructure for fuelling & transport of hydrogen to filling stations is extremely difficult and expensive. If a country would invest in green hydrogen and electrolysers, there is a direct competition to other electricity use. Hence coal fired power plants would run longer to fuel inefficient and expensive hydrogen vehicles. Therefore, in investment decisions, this potential lock-in effect should be carefully taken into account.	GIZ	Thank you for you comment. We fully agree. Text has been include the point about maturity and infrastructure development. We agree with your point about lock-in effect, however the exhaustive effects of complex decision making in this regards is beyond the scope of this document.
3.1	These points pertain only to public transport; the challenges for the transition to zero-carbon emission transport for other sub-sectors (e.g. heavy-duty vehicles, shipping, etc.) are of a different nature and should also be discussed.	Swiss Agency for Development and Cooperation (SDC)	Thank you - the statement has been generalized to apply (as it does) across different subsectors of transport.
3.1.1	As UNDP, we wonder if a stronger correlation between this Guide and the “Cities, Buildings and Urban Systems” can be established. This may be done under pathways 1 and 2. This is to underline the importance of coherence between transport and urban planning sectors as they are strongly related to each other. Such an integrated approach may be achieved through providing specific guidelines under “pathway sections” and the “possible actions tables”.	UNDP	Thank you - we fully agree there are obvious interfaces and correlations between the two sectoral guides. Also reference table ES-1 Cross-references with other Sector Guides. The aim of the guide is to function on a standalone basis.
3.1.1	The document does not mention the challenges related to informal or semi-formal transport although in emerging economies, the latter often provide the majority of the public transport services under low climate related regulations. Switzerland therefore recommends to include the support to the gradual integration of informal service providers into the formal transport system as an area of action for GCF.	State Secretariat for Economic Affairs (SECO) Economic Cooperation and Development, Infrastructure Financing	Thank you - the relevance of the informal transport sector posing particular hurdles in investing in low emission transport technologies has now been more accurately reflected.

3.1.1	As UNDP, we welcome the prioritization of public transport solutions in the Guide. In addition, we suggest having an equal emphasis to commercial fleets such as freight transport, logistic services, private and public sector fleets, food and goods delivery services etc. The commercial fleets are growing at a global scale especially after Covid-19 pandemic and with the availability of digital services. We believe that there is a vast potential to decarbonize commercial fleet operations worldwide. Today, the electrification of commercial fleets is already financially viable in most of the middle-income countries. Several private ventures/start-ups are building scale in the sector through deploying EVs. However, a key barrier these ventures/start-ups face is the cost of capital. EV financing from local banks/financial institutions is still limited due to perceptions around technology and operational risks. Besides, limited equity financing is available for these ventures/start-ups. Therefore, the GCF may consider investing in venture capital/private equity funds as a Limited Partner (or Fund of a Fund approach) and also aim to work with national governments, domestic and international banks and financial institutions on lowering the cost of capital (via concessional green credit lines, credit guarantees, first loss guarantees) and making more capital available for these ventures/start-ups.	UNDP	Thank you - commercial fleets (non-PT) are intended to be addressed primarily in pathways 2 and 3. Referencing section 4 of the guide concerning financing instruments and GCFs role accordingly.
3.1.1	In most developing countries, paratransit is the dominant mode and it is operating without subsidies. It provides informal jobs to people and usually is the only mobility option. This issue is one of the key barriers to public transport investment and electrification.	GIZ	Thank you for sharing information related to paratransit and well noted.
3.1.1	This may have effects over cars but not other vehicles as motorcycles. Public transportation infrastructure/supply is not always available, therefore demand looks for other alternatives.	GIZ	Thank you and noted.
3.1.1	Often public transport (metro, tramway, BRT, Buses…) is well developed in the centre of the metropolis but far scarcer in the suburbs. There is an important issue in developing an organising better public transport in urban peripheries.	International affairs mission Officer/ Mobility Department/ Cerema	Thank you and agreed - a clarifying statement is added reflecting the same.
3.1.1	Last barrier: also consider lack of awareness of the benefits of soot-free and low or zero emission public transport (e.g. quantifying health and economic benefits from reduced air pollution)	Swiss Agency for Development and Cooperation (SDC)	Thank you for the suggestion. The text has been edited.
3.1.1	Sustainable Urban Mobility Plans (SUMPs) are missing. It is a main instrument for the integrated and participatory planning in the EU. Please refer to the tools, methodologies and examples at www.MobiliseYourCity.org	GIZ	Thank you for your comment. We have inserted a reference to SUMPs in the text.
3.1.1	Parking management is missing in this list - this is one of the most powerful tools. Congestion pricing is a high-tech solution only suitable for few cities.	GIZ	Thank you for your suggestion, parking management has been included in the text.
3.1.1	This can be extended towards transit users.	GIZ	Thank you for your comment. We agree it can be also extend to transit users, however in the context of transformational planning and programming, this sentence is specifically targeted at cyclists and pedestrians safety improvement programmes.
3.1.1	'Update of norms/guidelines plus development of professional associations\ can be added	GIZ	Thank you for your suggestion, these two points have been added to the text.

3.1.1	As UNDP we suggest GCF to emphasize the role of digitalization in the transport sector and possibly define a sound framework for digitalization within this Guide. Although the transport sector is already somehow digitalized, we believe that there is still a room for adopting new digital services to improve the efficiency of operations, user experiences, and monitor and assess the GHG emission reductions from the low-emission solutions.	UNDP	Thank you - we agree to the relevance (for this sectoral guide) of digitalization and smart technologies where they can be used to underpin the pathways and actions described - e.g. for better planning, economically rationalized pricing structures, better realization and use of NMT infrastructures, etc.).
3.1.1	We welcome GCF's prioritization of micro-mobility and NMT as part of the low-emission transport solution. In practice, we witness that these solutions do not receive enough attention and investment in the developing world. We believe a strong emphasis on last-mile connectivity solutions is a need and can lead to sound economic returns in case grants/concessional funding can be provided to catalyse these solutions.	UNDP	Thank you for the comments and information, this is well received.
3.1.1	UNDP defines safety as one of the key barriers for the uptake of public transport services by local communities, especially by women and girls, who are more dependent on such services than men, especially in LDCs-SIDS. We suggest having a strong emphasis on integrating safety related solutions into the Low-emission Transport Guide. The Guide may list various potential actions such as integrating surveillance systems to e-buses and bus-stops, enrolment of personal mobile applications specific to safety, door-to-bus stop designs/solutions.	UNDP	Thank you and agreed - the guide adds strong emphasis to this in section 3.2 (original line #s 437 and onward).
3.1.1	Switzerland particularly commends the focus on avoiding unnecessary travel and on favoring the shift to low-carbon transport modes. In this sense, we fully agree with the emphasis put on strategic planning and demand management (para 413 Transformational planning and programming) under the first pathway "Accelerating shift to low emissions public transport".	State Secretariat for Economic Affairs (SECO) Economic Cooperation and Development, Infrastructure Financing	Many thanks for your comment.
3.1.1	One more time I would stress on the issue of the implementation of an Urban Mobility Agency at the local level which would be in charge of the planification, the organisation the definition of the services for public transport and which control and coordinate the different public and private actors involved in this activity.	International affairs mission Officer/ Mobility Department/ Cerema	Thank you and agreed - added a clarification to reflect the same.
3.1.2	We would also suggest pulling out more on the 'leapfrogging opportunities' as this is an area where the GCF could play role as an enabler. Opportunities for leapfrogging could also be useful to add under the 'coalitions and knowledge to scale up success' driver and 'paradigm shift potential' investment criteria.	GCF Advisor	Thank you and agreed - the same is reflected under 'coalitions etc.' as well.
3.1.1 or 3.1.2	Complementing the public transport ecosystem, what role does the GCF foresee for the electrification of vehicle fleets (e.g. taxi fleets, ride-hailing companies)?	Swiss Agency for Development and Cooperation (SDC)	Thank you - GCF emphasis in this sectoral guide (first and foremost under the actions and attentions given to the first pathway) the relevance of a shift towards more collective low emission public transport systems, where needed and relevant (e.g. for last mile) integrated with micromobility/NMT.
3.1.1	"or biofuel powered vehicles for their public transportation systems."Limit the eligibility, for public transportation systems, to electricity and hydrogene? Yes, biofuels are not, as of today, neutral in terms of CO2 emissions. At least, exclude first generation biofuels.	French ministry of the ecological transition	Thank you - agreed and clarified accordingly.

3.1.2	“ batteries […] high replacement ratios (in which multiple e-vehicles replacing one ICE vehicle – particularly a barrier for public transport fleets) are common concerns with electric vehicles (IPCC, 2014; ITDP, 2021)” Excessive ?	French ministry of the ecological transition	Thank you for the comment. We feel the text is not excessive and appropriately reflects some operational considerations relating to electric vehicle investment decisions.
3.1.1 (Table 5)	This is not the case, usually batteries last longer than expected.	GIZ	Thank you for your comment. We agree that batteries can last longer than OEM specs, however the paragraphs is refering to some situations where this is not the case and which may be attributed to lessor quality batteries / OEMs where the cost quality ratio is not comparable to the average and which can have a particular impact on the financial projections particularly of larger investments where ROI is highly sensitive to EV lifespan.
3.1.1 (Table 5)	What is missing as well is sufficient renewable energy to cover the additional demand of the transport sector.	GIZ	Thank you for your comment. The text has been updated to include reference to the need to ensure sufficient renewable energy.
3.1.2	Promote the refit of existing vehicles	International affairs mission Officer/ Mobility Department/ Cerema	Thank you for your comment. Text included.
3.1.2	Data collection, assessment and sharing the results for low-emission transport demonstrations is important for removing knowledge and awareness barriers. For instance, range anxiety barriers of institutions and persons can be removed by providing information from such monitoring/ assessment efforts. As UNDP, we suggest addition of outreach-knowledge dissemination activities to data collection efforts. Such activities may target specific audiences (decision makers, private sector, public etc.).	UNDP	Thank you for your feedback. A separate paragraph has been inserted to address the challenge of actively sharing knowledge and removing awareness barriers.
3.1.2	UNDP suggests GCF to consider adding smart grid - charging point solutions as a potential action. For instance, vehicle to grid (V2G) solutions may provide huge potentials in terms of energy management, avoidance of further fossil-based energy investments through eliminating peak demands by using connected EV batteries, and finally, in terms of EV deployment.	UNDP	Thank you - agreed and clarified accordingly.
3.1.2	In its e-mobility programming, UNDP works with Governments to define innovative approaches for financing low-emission transport. One example is from Uruguay, where UNDP and the Government analyse the existing fossil-fuel based subsidies in the public transport sector and then repurpose them for transition to low-emission public transport modes. Another example is from Mauritius, where UNDP and the Government is planning to re-design the existing bus fleet renewal subsidy programme for public and private bus companies, towards e-buses. This project is recently approved by the GEF and will start in 2022.	UNDP	Thank you for sharing information from UNDP relating to innovative low emission transport finance approaches.
3.1.2	The Guide may refer to the Global E-mobility Programme, funded by the GEF, and the knowledge tools that are being designed by the Programme. The E-mobility Toolbox will be a global knowledge centre for e-mobility projects. The site can be found here: https://emobility.tools/#Home Also, under the same Programme, four different Regional Support and Investment Platforms will be established to support countries for e-mobility.	UNDP	Thank you for your comment. Text has been added to refer to global knowledge centres for e-mobility projects.

3.1.3.	As noted above, there is no discussion of sustainable synthetic fuels, which would fit in this section; while facing their own set of challenges (including currently high-costs), they may have less environmental impacts than biofuels (including second generation biofuels). The document should either include these or explain why they are not being considered.	Swiss Agency for Development and Cooperation (SDC)	Thank you and noted.
3.1.3. (Table 7)	This requires huge additional renewable energy - this aspect needs to be integrated.	GIZ	Thank you - a clarification has been added to reflect this aspect more accurately.
3.1.3. (Table 7)	This is urgently needed to decarbonise fertiliser industry, steel industry, aviation and shipping... not much for road transport.	GIZ	Thank you for the comment, though we think given the mandate and scope of the sector guide this can not be elaborated further.
3.1.3	Regarding GCF pathways to support scale up of new generation zero emission fuels, it would be useful to see more information how the Fund will be using biofuels. On page 15, it outlines that it would rely on biofuels that were “fully sustainable”, but we do not think the possible actions/mitigations fully address the barriers also listed (page 21-22). For road transport specifically, the use of biofuels can be high risk, so we would welcome further information from the secretariat on how to properly mitigate challenges if used.	GCF Advisor	Thank you - the guide clarifies any attention or role for biofuels to concern second generation biofuels.
3.1.3	Barrier: “Concerns with environmental effects of alternative fuel systems” Please also discuss the potential competition for land between reforestation efforts and land use associated with advanced biofuels.	Germany BMZ	Thank you - the guide clarifies any attention or role for biofuels to concern second generation biofuels - detailed analysis of land use policy and competition is, although ultimately relevant to the underlying choice, considered beyond the reach/scope of this guide.
3.1.3	Biofuels can compete with food supply but also link to major deforestation, destruction of biodiversity, water consumption. They can also be produced by a non-sustainable agriculture using lots of fertiliser and pesticide. As for electric power the way biofuel is produced is a major concern (83)	International affairs mission Officer/ Mobility Department/ Cerema	Thank you for your comment. The text has been updated to include reference to these points.
3.1.3	Concerns with environmental effects of alternative fuel systems: It is important to include that biofuel cultivation, such as on peatlands and natural grasslands, may pose significant risks for biodiversity and may impact the future need for natural resources and ecosystem functions and services. There is a need for biodiversity safeguards even when considering second generation biofuels.	Convention on Biological Diversity	Thank you for your comment. The text has been refined to include reference to these points.
3.1.3	Second Driver in table: “…zero emission biofuels which are safe from environmental perspective” – also add the social dimension (i.e. *and which do not lead to any negative social impacts* - given the risks to land rights and food security, in addition to the risks to biodiversity and the environment)	Swiss Agency for Development and Cooperation (SDC)	Thank you for your feedback. The text has been augmented to include this reference.
3.1.3	What about the shift to rail for long-haul? Freight below 200km can be electrified.	GIZ	Thank you and agreed, a clarification has been added to reflect the same.
3.2	Most co-benefits you describe are related to pathway 1 (access, gender, social), some to pathway 2 (air) and only very few to pathway 3. Pathway 3 even includes high risks in terms of sustainability, e.g. food shortage, land-use change etc.	GIZ	Thanks you for your comments. Text has beed augmented to include the suggestion of food shortage and land use optimisation.
3.2	This may not be the case with biofuels. In contrary, it may maintain these problems.	GIZ	Thank you and agreed, a clarification has been added to add nuance.
3.2	These co-benefits may be counteracted by the potential ecosystem destruction created by biofuel cultivation.	Convention on Biological Diversity	Thank you for your comment. The text in table 7 under 'Concerns with biofuels' has been strengthened to include reference to biofuel cultivation risk.

3.2	This section could be improved by also including the trade-offs involved with these projects and programmes, as each of the listed co-benefits can be counteracted by potential negative impacts. The sustainable development potential for co-benefits relies heavily on how the projects are implemented and followed-up on, ie post-project qualitative assessments.	Convention on Biological Diversity	Thank you and agreed - a qualifying clarification is included to reflect theneed to review/optimize the balance of co-benefits and adverse impacts on a case by case basis (pre *or* post implementation).
3.2	Not valid for biofuels.	GIZ	Thank you and agreed, a clarification has been added to reflect the same.
3.2	We welcome GCF's approach on mainstreaming gender considerations. UNDP suggests a more progressive approach for the low-emission transport guide where gender considerations may have a more central role. UNDP lists below points for GCF's consideration: -Public transport and two wheelers are most important for mobility of women in developing countries, particularly among lower middle-income households. UNEP and ICCT studies have shown that women in these household groups have historically maintained higher daily trip rates than those in upper middle income and high-income households, which shows that women in lower middle income/low-income households tend to commute for work more often than their upper middle income/high income counterparts. And the preferred modes of transport of choice of women of these households are public transport and two wheelers. However, increase in fuel prices, general urban pollution and women's safety issues have been contributing to reducing daily trip rates among women in these households. Electric mobility lowers energy costs, reduces pollution and most EVs are smart vehicles with safety features built in and hence are quickly becoming the preferred modes of transport for women in developing countries. -Transition to electric vehicles creates opportunities for women in terms of finding jobs in public and private bus companies and maintenance/service chains. Since transition to electric vehicles will be changing these service lines, the GCF strategy may prioritize capacitating women and ensuring providing equal rights for women to access such opportunities. -Currently, the e-commerce/logistics/delivery companies mostly have men as their workers/drivers. The GCF Guide may specifically support women-led e-mobility start-ups and initiatives. Also, the Guide may prioritize supporting e-commerce/ delivery companies that are prioritizing hiring women workers and drivers.	UNDP	Thank you for your feedback. The text has been augmented to include this reference.
4.1	This statement is in contrast to what is observed in practice where projects are limited by their volume to adjust to budgets that are not ambitious or reflect what entails a paradigmatic change and then mechanisms are focused on a few and grants for example, are not considered as alternatives to minimize risks.	GIZ	Thank you - and noted. This would be discussed during project fromulation.
4.5.2	The example for greening of inland waterway transportation using hydrogen seems relatively inefficient from a financial and economic point of view in this decade due to the persisting infancy of the technology and the relatively high costs attached to decarbonising an already relatively efficient technology. We suggest replacing the example with a more efficient project (e.g., rapid bus transit system).	Germany BMZ	Thank you - the BRT example is already used under the case studies #1.
5. Case studies	The GCF may wish to consider providing an example of a project where blended finance was used (if applicable).	Policy Analyst/Advisor to the GCF	Thank you - the included case examples already reference blended finance approaches mixing commercial finance and concessional financing from GCF.

5.1	Our final comments is that it is certainly good to mention good practices (Shenzhen, Santiago…), but GCF should make the reader aware of the very particular circumstances in which they occur: The leasing scheme in Shenzhen was only possible due to the strong hold of the Chinese government in the financial and industrial sectors; the scheme in Santiago has been very costly (and one contributor to the raise in PT fares that led to social unrest). We are not saying that there are not good lessons to learnt from these experiences, but only that GCF should stress that the context matters a lot.	UNDP	Thank you and agreed - emphasis to importance of context added.
6.1	The analysis of the impact potential should include an assessment of alternative approaches with a view to the principle of sustainable urban transport “Avoid-Shift-Improve”.	Germany BMZ	Thank you - and noted.
6.1	The mitigation potential of zero emission fuels (E-Fuels, Green Hydrogen) for road transport is limited. Maturity and availability of this technology is not given. Maximum impact should be rather expected through behavioural changes (Avoid and Shift).	GIZ	Thank you - but as maturity and availability of ZE alternatives are now ramping up exponentially (with market price points, O&M service offerings, experienced performance over time etc. improving rapidly), high impacts within the time horizon for climate goals are expected from these.
6.2	Don’t forget organisational issues, the importance of the roles of the different relevant actors to be sure that the project will be well implemented and managed (6.5)	International affairs mission Officer/ Mobility Department/ Cerema	Thanks you for your comments. Text has beed added.
6.3	How to deal with conflicting objectives under the criterion sustainable development potential? Example: it is proposed to develop a low-carbon emission transport system in a city using GCF funds. The proposed project does not replace any mobility infrastructure and the infrastructure would not develop without GCF funds (i.e. the baseline emissions in this scenario are very low). This means that the project leads to increased emissions, but contributes to sustainable development and is in line with the sectoral guide.	Germany BMZ	Thank you - the proposed project would have to demonstrate modal shift from higher emission systems or generation of additional demand. It would ideally show the new infrastructure to capture new demand into a low emission transport service in a structured, committed and long term way.
6.3	Beware of the possible footprint transfers, this should be considered in the analysis	International affairs mission Officer/ Mobility Department/ Cerema	Thank you - and noted.
6.3	Under 6.3 or elsewhere, more focus should also be placed on reducing the risks of possible negative impacts, e.g. from poor management of batteries (requiring projects to propose strategies for reuse of batteries and ultimately recycling, in line with national policies where they exist); as well as from the production of hydrogen and biofuels.	Swiss Agency for Development and Cooperation (SDC)	Thank you - this clarification has now been added under 3.2 accordingly.
6.6	Referring to abatement cost? “for each tCOeq reduced”? It is true that transport projects have higher abatement costs than other sectors. However, not investing in sustainable mobility will blow up the bill even more. So high costs should not discourage investments.	GIZ	Text amended to include "investment in sustainable mobility projects should be encouraged to avoid even higher corrective investments in future years."
6.7	It is also possible to take benefit of the expertise of public and private engineering offices or associations. I would stress on the expertise of some independent and neutral actors in that field (in France Cerema, Codatu…). The expertise of universities can also be mobilised and they can also provide training	International affairs mission Officer/ Mobility Department/ Cerema	Thank you and agreed, clarified accordingly.

6.7	The Climate and Clean Air Coalition (CCAC) should be mentioned here among coalitions and networks. The CCAC has a specific Engagement Strategy on the transport sector (with a specific focus on heavy duty vehicles), covering several areas of specific relevance to this sectoral guide, namely Cleaner Fuels and Vehicles, Marine and Inland Water Transport and Green Freight. The CCAC provides technical assistance resources and analysis, which could inform and support GCF efforts on the transport sector. See: https://www.ccacoalition.org/en/initiatives/heavy-duty-vehicles; https://www.ccacoalition.org/en/resources/ccac-engagement-strategies	Swiss Agency for Development and Cooperation (SDC)	Many thanks for your comments. A reference to other networks and partnerships has been included with specific mention to CCAC and it's focus areas.
6.7	Is this statement vetted by CIF? It is a bit confusing since the reference/source says GEF 2019, while the statement refers to “these organisation”. As for Figure 7, the reasons for inconsistencies in transport project climate finance could also be demand/technology driven. But what has been funded under CTF/SREP may have also been trailblazing in the sector.	Asian Development Bank	Thank you and duly noted.
6.7	Large consortia can become inefficient and have the risk of failed projects due to delays or dropouts by consortium members. While we completely agree with the overarching approach of getting additional funding partners on board for GCF projects, it could be worthwhile to add a word of caution along the above lines.	Germany BMZ	Noted, text added.
Conclusion	“These transformational pathways also lead to greater adaptation and resiliency impacts.” Please provide evidence for this statement or specify to avoid confusion. Example for potential of confusion: An electrified railway system is as exposed (or more exposed) to physical impacts of the climate crisis as an unelectrified railway system.	Germany BMZ	Thank you - and added accordingly to clarify.