



Sector: Transport



SDG-NDC Synchronization: Assessment and Recommendations

How can the Nationally Determined Contributions on Climate Change and the 2030 Agenda for Sustainable Development complement and support each other towards a sustainable future?

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Assessment and Recommendations for Integration of Sustainable Development Goals within Lebanon's Climate Related Plans

Description and Objectives

The Paris Climate Agreement's Nationally Determined Contribution (NDC) and the Sustainable Development Goals (SDGs) share some mutual goals and a common target year (2030). Many synergies exist between the two agendas, and addressing those linkages from an integrated institutional viewpoint will enhance the implementation, coordination and tracking of the different actions. The aim of this analysis is to assist policymakers in:

- Assessing the sectoral policies that make up the NDC in terms of SDG linkages using the SDG Climate Action Nexus tool (SCAN tool) in order to establish and clarify the linkages;
- Identifying progress indicators of NDC policies to inform SDG progress and vice versa, in order to synchronize reporting;
- Operationalizing the coordination between institutions responsible for the implementation and reporting of both the NDC and SDGs.

Methodology

- The SCAN-tool provides high-level guidance on how climate actions can impact the achievement of the SDGs (http://ambitiontoaction.net/scan_tool/);
- Coupled with local expertise, this analysis:
 - Identifies potential linkages between specific recommendations included in each of Lebanon's climate related plans and policies and the SDGs;
 - Includes the identification of a primary SDG linkage along with other relevant SDG linkages;
 - Identifies potential linkages to all of the SDG targets, and provides further recommendations.
- All climate-relevant and sustainable development plans inherently contribute to SDG 13 (climate action);
- SDG 17 addresses global partnerships and means of implementation, relevant SDG 17 linkages to local plans are also identified in this assessment.

This is not an exhaustive analysis but it provides a sound basis to better understand where and how Lebanon's climate actions impact SDG achievement.

How to use this guide?

Step 1: Review

This guidance recommends certain linkages per SDG which should be reviewed in the context of policy-making.

Step 2: Prioritize

Not all the linkages made have the same relevance to the policy or activity, therefore, the linkages should be prioritized considering magnitude of impact, co-benefits and other criteria depending on the institution and its priorities.

Step 3: Consult

Depending on the prioritized SDGs, stakeholder consultations for policy-drafting should include the lead institutions responsible for implementing the selected SDGs.

Step 4: Synchronize

When implementing the policy, synchronization at the level of tracking between the different institutions, the NDC committee and the SDG committee should be considered.

Sector: Transport
Sub-sector: Public Transport
Source document: Land Transport Strategy for Lebanon
Ministry: Ministry of Public Works and Transport (MoPWT)

Plan/ Policy Overview

The Transport Strategy contains short and long-term goals aimed at shifting transport demand to public transit. The strategy aligns with the SDGs in terms of providing safe, decent and accessible transport as well as reducing Greenhouse Gas (GHG) emissions through a modal share shift to public transit. Therefore, it also addresses poverty, accessibility, impact on cities, climate change, equity and the economy. It also addresses reducing inequality through increasing accessibility, safety and affordability. “The vision of land transport policy in Lebanon is defined as an integrated and efficient land transport system supporting a thriving economy that promotes sustainable economic growth, supports a healthier life style, provides safe and accessible mobility options, socially includes all Lebanese people, and preserves its environment”. Therefore the plan directly touches on many of SDG goals of the 2030 Agenda.

Links to Climate Change and Sustainable Development

In Lebanon’s Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, the overall mitigation targets do not include specific transport targets. However, where the NDC mentions the energy sector, this covers power and fuel consumption in all sectors, including industry, transport, households, agriculture, etc.

<i>Unconditional Target</i>	A GHG emission reduction of 15% compared to the Business-As-Usual (BAU) scenario in 2030
<i>Conditional Target</i>	A GHG emission reduction of 30% compared to the Business-As-Usual (BAU) scenario in 2030

The following assessment identifies the linkages between the specific actions in the Transport Strategy to the SDG targets (Tables 1 and 2). It identifies, how a modal share shift for example, can positively or negatively impact SDG targets.

Table 1: Primary SDG Target






Relevant SDG	How does the Transport Strategy contribute to this SDG? (examples)
	<ul style="list-style-type: none">- Reduces air pollution and improves ecosystem and habitat conservation due to reduced pollution and land use activities- Increased public transport, increases sustainable transport and improves road safety due to modal shift (fewer cars) and improved infrastructure- Increased mobility supports increased access to opportunity and interconnectedness across geographies (urban, peri-urban and rural)

Table 2: Highly Relevant SDG Targets

Relevant SDG	How does the Transport Strategy contribute to this SDG? (examples)
	<ul style="list-style-type: none">- Improves road safety and decreases number of global deaths and injuries from road traffic accidents by reducing number of vehicles- A modal share shift reduces air pollution from reduced fuel use
	<ul style="list-style-type: none">- Modal share shift requires and supports development of sustainable, affordable and accessible transport infrastructure (national, regional, international)
	<ul style="list-style-type: none">- Increased mobility means more equitable access to opportunity - jobs, schools, hospitals and other resources- Improved mobility in strategic national areas promotes more equal access to resources
	<ul style="list-style-type: none">- Increases resource efficiency (more efficient / reduced use of fossil fuels for transport)- Capacity building and training on climate change mitigation and its impacts to key institutions and stakeholders in the road transport sector will spread awareness for sustainable development- Improved regulatory framework and established incentives that support more sustainable consumption of natural resources (including fossil fuels) in the road transport sector in Lebanon

Summary of Recommendations

The next Transport Strategy update or amendment should continue to demonstrate the strong co-benefits to specific SDG targets, and the NDC goals. In doing so, there should be narrative that focuses on the plan’s broader societal goals and impact on addressing climate change. The current strategy already contains ten broader directives which connect nicely to the SDGs (see Table 4 keyword search), and this could be explicit drawn out in future iterations. As highlighted above, a modal share shift to

public transit positively impacts at least fourteen SDG targets and advances the NDC goals in reducing GHG emissions, and it should therefore be demonstrated in the plan so that common entry points can be better understood within and among Lebanon's sustainable development related plans and policies. This assessment found additional SDG linkages beyond what is contained in the current strategy such as:

- Mass transit strategies can reduce transport cost as part of the household budget by providing public transit as an alternative to car ownership, which could potentially positively impact low-income families (SDG 1) and household income (SDG 4).
- Further, mass transit that aims to increase mobility and accessibility can greatly improve access to jobs and income potential, and provide more equitable access to other important places such as schools, hospitals, and shopping (SDG 10).
- Reductions in emissions as the result of increasing the share of public transport and reducing the number of private vehicles on the road can greatly reduce respiratory illnesses (SDG 3).
- A modal share shift to mass transit will require not just a significantly upgraded infrastructure (SDG 9) but also a massive public awareness campaign that encourages behavior change (SDG 4).

Future iterations of the Transport Strategy should continue to consider the potential impact on all SDG targets and in addressing climate change when developing and prioritizing specific implementation strategies. For example, the plan should prioritize measures that are most economically feasible and have largest impact on both the NDC and SDGs. In other words, there are opportunities in portraying mass transit through a more holistic approach: looking through the lens of the SDGs and NDC might result in a different prioritization of plan strategies.

- For example, looking at public transit from a gender perspective might result in new strategies to include women and girls in decision making and implementation strategies especially in terms of promoting safety, ease of mobility and access to opportunity.
- Additionally, looking at transport in terms of mobility and accessibility shifts the focus to looking at the transport sector through an equity lens and squarely on the SDGs' overlying theme of leave no one behind.
- Further, transport key indicators should be developed and synthesized with other plans and policies, to include a broader assessment of meeting SDG targets and NDC goals.
- The SDG and NDC committees should work collaboratively, alongside the responsible ministries, in the development of joint indicators that can be utilized among all sustainable development related plans and policies to jointly assess both NDC and SDG progress.

Potential Negative Linkages

The majority of the transport strategies result in largely positive benefits to the environment however, a few measures can have negative or unintended consequences. The overall impact and potential trade-offs need to be weighed to determine if projects have a net positive impact and/or if potential negative impacts can be avoided. Moreover, some negative linkages may not be detrimental specifically to the

environmental, but they can have negative consequences on other SDGs such as hunger, poverty, health or jobs. Therefore, it is imperative to understand how certain plan recommendations may negatively impact some SDGs. Table 3 illustrates some examples of the potential negative linkages that the deployment of energy efficiency could have on the SDGs.

Table 3: Potential Negative Linkages to SDGs

<p>8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value</p>	<p>Potential job losses in personal vehicle value chain (manufacture of cars, servicing, petrol stations)</p>
<p>1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance</p>	<p>Expanding public transit could leading to competing land uses and the potential displacement of families</p>

Sustainable Development Anchors: what is there and what is missing?

A key word search and review of the Transport Strategy identifies where the plan explicitly addresses components of sustainable development and climate change. While the SCAN tool identified where linkages exist between plans and the SDG targets, further examination of each plan reveals where these linkages are explicitly stated in each plan. For example, mass transit has a strong linkage to Sustainable Cities and Communities (SDG 11) but these linkages are not included as part of the Transport Strategy narrative.

The following is an assessment of sustainable development and climate change language included the Transport Strategy and recommendations for creating linkages and estimations of impacts in future iterations of the plan (Table 4). The below recommendations tackle the primary SDG, the other highly relevant SDG linkages, as well as the rest.

Table 4: Recommendation for Estimation of Impact of SDGs

Key Words	Description in the Policy/Strategy/Action Plan	Recommendation for Estimation of Impact/Integration of Impact
<p>SDG One: No Poverty</p> <ul style="list-style-type: none"> · Low-income · Poor · Poverty · Disadvantaged · Underprivileged 	<ul style="list-style-type: none"> - Ensure transport accessibility to disadvantaged areas, and reduce negative impacts; - An affordable, integrated, safe, responsive and sustainable land transport system relies on all modes of public transport that make up the national transport network; - The main objectives are to create better accessibility conditions for citizens and freights, reduce transport cost, and limit negative impacts on the environment and urban space; - If well executed and efficiently managed and promoted, this project will be beneficial in reducing travel cost and time, as well as congestion; - Create a transport system that is consistent with the real needs of people living in different parts of Lebanon and with different abilities to afford travel; - Ensure transport accessibility to disadvantaged areas, and reduce negative impacts. 	<ul style="list-style-type: none"> - Reductions in transport cost as part of the household budget through enhanced and more affordable transport options can provide more economic security; - Increased mobility increases access to economic opportunity.
<p>SDG Two: Zero Hunger</p> <ul style="list-style-type: none"> · Hunger · Food access · Food security · Food affordability · Agricultural Productivity 	<p>Hunger is not addressed in the Transport Strategy.</p>	<ul style="list-style-type: none"> - Expanded transport accessibility can lead to greater income earning potential and access to opportunity; - Easing congestion and transport costs can decrease food costs.
<p><u>Highly Relevant SDG</u></p> <p>SDG Three: Good Health and Well-being</p> <ul style="list-style-type: none"> · Environment · Health · Pollution 	<ul style="list-style-type: none"> - Increase the safety and easier cycling and walking (soft movement), and reduce traffic congestion in dense residential and commercial regions; - Diversify modes of transport which will result in fulfilling transport needs pertaining to the infrastructure, and reduce the negative effects of modes of transport on the environment, the economy and health. 	<p>In addition to SDG 3 in Table 2:</p> <ul style="list-style-type: none"> - A pedestrian friendly environment supports walking and healthier lifestyles; - A modal share shift Improves mental health and well-being by reduced traffic-related stress and reduces air pollution, except when shifting to bioenergy.

Table 4: Recommendation for Estimation of Impact of SDGs

Key Words	Description in the Policy/Strategy/Action Plan	Recommendation for Estimation of Impact/Integration of Impact
SDG Four: Quality Education <ul style="list-style-type: none"> · Education · Awareness raising · Youth 	Education is not addressed in the Transport Strategy.	Awareness raising campaigns would improve road safety and promote behavior change (modal shift).
SDG Five: Gender Equality <ul style="list-style-type: none"> · Women · Gender · Vulnerable groups · Rural communities 	Gender is not addressed in the Transport Strategy.	Increased mobility through mass transit designed with gender in mind can increase access to opportunity and improve safety for women.
SDG Six: Clean Water & Sanitation <ul style="list-style-type: none"> · Clean water · Drinking water · Wastewater · Water quality 	Clean water and sanitation are not addressed in the Transport Strategy.	Reducing transport demand contributes to reduced outdoor air pollution and reduces water pollution (run-off).
SDG Seven: Affordable & Clean Energy <ul style="list-style-type: none"> · Energy efficiency · Electricity transmission · Electricity distribution · Reliable energy · Affordable energy · GHG reduction · Mitigation · Energy security 	<ul style="list-style-type: none"> - The full implementation of the master plan would eventually induce significant emission reductions. However to date, since no concrete action has been taken yet towards the implementation of the masterplan, no emissions reduction could be quantified; - Innovative technologies provide cleaner and safer transport. Research and development on vehicles and infrastructures standards favor green mobility, and produce more energy-efficient engines, consuming less fuel and therefore producing lower exhaust emissions. 	More efficient transport options and engines will decrease GHG emissions.

Table 4: Recommendation for Estimation of Impact of SDGs

Key Words	Description in the Policy/Strategy/Action Plan	Recommendation for Estimation of Impact/Integration of Impact
<p>SDG Eight: Decent Work and Economic Growth</p> <ul style="list-style-type: none"> · Jobs · Income · Employment 	<ul style="list-style-type: none"> - Main objective: competitiveness, market access and economic growth; - Diversify modes of transport which will result in fulfilling transport needs pertaining to the infrastructure, and reduce the negative effects of modes of transport on the environment, the economy and health; - International gateways and trade corridors are important for national and regional competitiveness, productivity, employment, quality of life, and environmental sustainability; - An effective transport system will assist Lebanon in achieving its economic potential by efficiently moving people, freight and services around and between regions; - Businesses need to transport people and freight reliably between locations, often to meet “just in time” requirements of their customers; - A transport system that enhances the quality of life will also help to attract and retain the skilled and talented people and innovative businesses that will assist in making Lebanon an internationally competitive, inclusive and dynamic economy; - Logistics is the backbone of trade and, therefore, a crucial driver of economic performance. Businesses rely heavily on efficient supply chains to integrate their production processes, and deliver finished products to the market in a timely and cost-effective manner. 	<ul style="list-style-type: none"> - Modal share shift can increase economic productivity due to shorter travel, and contributes to technological and infrastructure upgrading, and to economic diversification and innovation; - Increases economic growth due to people being able to save commuting time which they can spend in their businesses; - Technologies to avoid travel (ICT etc.) can increase economic productivity, contribute to technological and infrastructure upgrading and innovation.
<p><u>Highly Relevant SDG</u></p> <p>SDG 9: Industry, Innovation, Infrastructure</p> <ul style="list-style-type: none"> · Industry · Innovation · Infrastructure · Research and development 	<ul style="list-style-type: none"> - The Master Plan to Passengers and Freights for a medium and long-term period, which uses a sustainable method and multi-modal transportation systems framework for the development of infrastructure facilities, interchange facilities and mobility’s service, constitutes the primary driver of the National Land transportation strategy; - Greener transport requires investment in innovation technologies and promotion of supporting standards; - Lebanon’s case studies confirmed the role of major international gateways, inland hubs and inland trade and transport connections in 	<p>In addition to SDG 9 in Table 2:</p> <ul style="list-style-type: none"> - Development of new mass transit infrastructure creates industrial opportunities and supports industrialization across the supply chain; - Development and operation of mass transit transport supports development of new vehicles and infrastructure and supports upgrading of technological capability in relevant industry sectors; - Providing reliable and accessible transport to all parts of the country supports economic development and human well-being through increased mobility for all.

Table 4: Recommendation for Estimation of Impact of SDGs

Key Words	Description in the Policy/Strategy/Action Plan	Recommendation for Estimation of Impact/Integration of Impact
	international trade and passenger transport. They are indeed economic infrastructures of key importance to national growth and development.	
<p><u>Highly Relevant SDG</u></p> <p>SDG 10: Reduced Inequalities</p> <ul style="list-style-type: none"> · Equity · Inclusion 	<ul style="list-style-type: none"> - Ensure transport accessibility to disadvantaged areas, and reduce negative impacts; - An affordable, integrated, safe, responsive and sustainable land transport system relies on all modes of public transport that make up the National transport network. 	<p>No additional recommendations beyond SDG 10 in Table 2.</p>
<p><u>Primary SDG</u></p> <p>SDG 11: Sustainable Cities and Communities</p> <ul style="list-style-type: none"> · Cities · Communities · Urban · Urbanization · Fuel efficient vehicles · Modal share shift · Public transport(ation) · Accessibility · Mobility 	<ul style="list-style-type: none"> - Main objective: safety and personal security is a key priority across all public transport systems and need to be considered at all stages of the design, construction, operation and maintenance of all parts of the transport system. This can be achieved by implementing the road safety strategy, addressing rail safety and security, and passenger, pedestrian, cyclist safety, and work zone safety; - Reducing traffic-related fatalities, and addressing concerns of personal safety and security; - An integrated strategy to reduce road accidents goes along with a combination of road safety measures: targeting accident black spots, safety infrastructure improvements, police control, road safety educational programs and campaigns, improved vehicle safety standards, and lower speed limits; - Most urban areas suffer from daily traffic congestions, the road network is over-saturated, and the main cause for these unbearable conditions is the predominance of the private vehicle over all other modes. Users’ preference of the private mode is mostly due to the chaotic situation in the public transport sector, which discourages the shift from the luxury of the private car to a public transport mode; - A part of the strategy’s 10 directives: <ul style="list-style-type: none"> - Promote and improve sustainable public transport system with better and safer access, more frequent and better-quality services and facilities; - Promote shift towards public transport, decrease the cost, better management on traffic, safety, mobility, productivity, energy, 	<p>In addition to SDG 11 Table 1:</p> <ul style="list-style-type: none"> - A modal share shift promotes an integrated approach, that is resource efficient and mitigates the impact of climate change; - Supports sustainable transport and increases road safety (fewer cars); - Capacity building approaches as part of mitigation policy in urban environments would develop relevant skills and capabilities in city government institutions; - Improve and better maintain road and rail network, facilitate traffic in order to provide enhanced access to strategic national area.

Table 4: Recommendation for Estimation of Impact of SDGs

Key Words	Description in the Policy/Strategy/Action Plan	Recommendation for Estimation of Impact/Integration of Impact
	<p>environment, and user satisfaction;</p> <ul style="list-style-type: none"> - Minimize urban transport travel time and improve journey time reliability on all land transportation modes; - Increase mass transport capacity to compete with private cars, and greater mobility options particularly for those who do not have a car; - Increase the safety and easier cycling and walking (soft movement), and Reduce traffic congestion in dense residential and commercial regions. 	
<p><u>Highly Relevant SDG</u></p> <p>SDG 12: Sustainable Consumption and Production</p> <ul style="list-style-type: none"> · Consumption · Production · Output · Productivity · Efficiency 	<ul style="list-style-type: none"> - Supporting green technology and clean fuels used; - This objective looks to reduce the negative impacts of the transport network on the environment, and promote sustainable approaches to transport to reduce reliance on non-renewable resources. 	<p>In addition to SDG 12 in Table 2:</p> <p>Can support companies to adopt sustainable practices e.g. flex working, ICT networks.</p>
<p>SDG 13: Climate Change</p> <ul style="list-style-type: none"> · Climate Change · GHG emissions · Resilience · Mitigation · Adaptation · Nationally Determined Contribution (NDC) 	<ul style="list-style-type: none"> - Sustainable development for strategic planning calls for an integrated procedure, which considers the inter-relationship between transportation, and the three key aspects of sustainability, which are the environment, the economy and society; - Supporting green technology and clean fuels used; - Creating public transport system with environmentally friendly vehicles; - Encourage a shift towards sustainable transport modes; - The Lebanese transport network must take into account the effects it will have on the environment. This reflects greater global awareness of land transport environmental impacts and the need for sustainable development. 	<ul style="list-style-type: none"> - Reference how the Transport Strategy contributes to climate change mitigation and adaptation; - Reference role of Transport policy in the NDC; - Align policy targets with the NDC.

Table 4: Recommendation for Estimation of Impact of SDGs

Key Words	Description in the Policy/Strategy/Action Plan	Recommendation for Estimation of Impact/Integration of Impact
<p>SDG 14: Life Below Water</p> <ul style="list-style-type: none"> · Water · Sea · Lakes · Streams · Rivers · Mediterranean · Marine life · Run-off · Water pollution · Coastal 	<p>Life Below Water is not addressed in the Transport Strategy.</p>	<p>Reducing transport demand contributes to reduced outdoor air pollution and reduces water pollution (run-off).</p>
<p>SDG 15: Life on Land</p> <ul style="list-style-type: none"> · Ecosystems · Biodiversity · Forests · Reforestation/ afforestation · Seed bank · Genetic 	<ul style="list-style-type: none"> - The pressures imposed by the transport system on the natural and physical environment (including the built environment) are likely to increase as the region grows especially owing to the high influx of Syrian refugees. 	<ul style="list-style-type: none"> - Improved public transport mobility/accessibility improves conservation of water ecosystems and improves ecosystem and habitat conservation due to reduced pollution and land use activities; - Improved transport mobility/accessibility means less passenger Vehicle Miles Traveled (VMT) which reduces degradation of natural habitats through reduced pollution and reduced land use.

Table 4: Recommendation for Estimation of Impact of SDGs

Key Words	Description in the Policy/Strategy/Action Plan	Recommendation for Estimation of Impact/Integration of Impact
<p>SDG 16: Peace, Justice & Strong institutions</p> <ul style="list-style-type: none"> · Capacity · Legislation · Regulation · Legal framework · Policy · Participatory · Inclusive (decision-making) 	<ul style="list-style-type: none"> - There is a necessity to amend the institutional context and organizational structure of related administrations in order to be in line with the new Law, especially regarding the complementary roles between decision-making and implementation; - Developing, implementing and strengthening the right institutional framework in Lebanon will guarantee the Land Transportation Strategy's successful implementation at all levels of government to benefit the community as a whole; - New laws will provide contributions from transport users to the cost of Lebanon's infrastructure projects, through charges linked to vehicles dimensions, exhaust emissions, and travelled distances; - Establishing national standards and guidelines, to serve as reference in all transport domains, is a mandatory task; - A part of the strategy's 10 directives: <ul style="list-style-type: none"> - Develop sufficient institutional human capital to drive the vision of transport; and a transport response that supports Land transport development; - Provide key-indicators to transportation planners and decision makers to facilitate the movement of people and freight. 	<ul style="list-style-type: none"> - Development of institutions and governance processes for climate change should support development of general governance capacities; - Develop institutional capacity and enact regulations and legislation necessary for effective and transparent institutions.
<p>SDG 17: Partnerships for the Goals</p> <ul style="list-style-type: none"> · Resource · Financing mechanism · Public-Private Partnerships 	<ul style="list-style-type: none"> - Approaches to funding and financing should take into account the diverse characteristics of the public transport sector. Policy makers may exercise levers on both sides of the funding balance if inflows remain sufficient to sustainable support expenditures; - At the national level, funding and monitoring mechanisms will be developed to assess the financial viability as well as the impact of proposed land public transport projects measured against a series of indicators related to national strategic objectives. Further national, Arabic or international funds may also be allocated for specific land transport modes; - A final framework to encourage Public Private Partnerships (PPPs) (within the next two years) as private sector participation in land transport could be a source of multiple benefits to both the 	<ul style="list-style-type: none"> - Funding plans that support the mobilization of domestic and international resources in the expansion of the road and rail network to strategic areas; - Regulation and legislation can enhance policy coherence making transport initiatives more viable; - Private sector participation in land transport could be a source of multiple benefits to both the Government and users.

Table 4: Recommendation for Estimation of Impact of SDGs

Key Words	Description in the Policy/Strategy/Action Plan	Recommendation for Estimation of Impact/Integration of Impact
	<p>Government and users;</p> <ul style="list-style-type: none">- Funding plans that consider using external revenues to support land transport projects could benefit from explicit funding commitments. For example, policy makers assigning specific assessment tax revenues from a defined area to land public transport service provision. This should include revenues collected from private transport users through taxes, fees, congestion charges, etc.;- A full transformation would include reallocation of resources and institutional reforms; but a taxation reform that would increase the system's overall efficiency is also a necessary component in that transformation.	

Annex I: Lead Institution per SDG in Lebanon

Theme: People	Leading Institution: Ministry of Education and Higher Education					
1 NO POVERTY 	2 ZERO HUNGER 	3 GOOD HEALTH AND WELL-BEING 	4 QUALITY EDUCATION 	5 GENDER EQUALITY 	10 REDUCED INEQUALITIES 	
Theme: Planet	Leading Institution: Ministry of Environment					
6 CLEAN WATER AND SANITATION 	7 AFFORDABLE AND CLEAN ENERGY 	12 RESPONSIBLE CONSUMPTION AND PRODUCTION 	13 CLIMATE ACTION 	14 LIFE BELOW WATER 	15 LIFE ON LAND 	
Theme: Prosperity	Leading Institution: Ministry of Economy and Trade					
8 DECENT WORK AND ECONOMIC GROWTH 	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	11 SUSTAINABLE CITIES AND COMMUNITIES 				
Theme: Peace	Leading Institution: Office of the Minister of State for Administrative Reform					
16 PEACE, JUSTICE AND STRONG INSTITUTIONS 						
Theme: Data and Statistics	Leading Institution: Central Administration of Statistics					
Cross-cutting theme:						
17 PARTNERSHIPS FOR THE GOALS 						

Annex II: Indicators

A cohesive and integrated indicator framework that synchronizes SDG and NDC progress is essential for coordinated implementation and joint progress assessment. Lebanon has yet to nationalize the SDG indicators which provides an opportunity to include climate focused indicators into the nationalized approach so that both agendas can be assessed through a mutual set of indicators. The absence of nationalized SDG indicators withstanding, a robust database of national level data can be found through the SDG API database. The database provides data from global sources at the national level that correspond to the Global SDG Indicator Framework, making comparisons of SDG progress across countries easily accessible and consistent.

The SDG global framework provides a valuable starting point to integrate the two agendas' indicator framework. However, a barrier to solely utilizing the SDG global framework for both agendas, is that it is limited in its ability to measure NDC implementation. Many of the SDG indicators are too unspecific or insufficient for tracking NDC progress. For example, greenhouse gas emissions are not included as an SDG indicator in the global framework (Bouyé, Harmeling, & Schulz, 2018). Therefore, in addition to utilization of the SDG global indicator framework, additional indicators are needed to effectively and cohesively monitor both agendas. As part of this research, identification of the targets, goals, data points and/or indicators within the NDC, Third National Communication and within specific plans and policies that comprise Lebanon's climate policies were identified to further provide a basis for developing an integrated indicator framework.

The final set of nationalized indicators should include a combined list of indicators that incorporate both the SDG global framework complemented by additional indicators that are climate focused, and germane to the goals of the specific plan/policy. Examples of potential indicators are identified in Annex II, Table 1 'other potential indicators' for the SDG targets that are relevant to climate change.

Annex II, Table 1: Potential Additional Indicators for an Integrated SDG & NDC Indicator Framework

SDG	Indicator	Climate Policy
<p>11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons</p>	<p>11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities</p>	<p>Transport NAMA Transport Strategy</p>
	<p>- Other potential indicators:</p> <ul style="list-style-type: none"> - Percentage of land territory covered by public transport - Change in mass transit ridership - Transportation to income ratio - Change in GHG emissions from transport sector - Share of emissions by vehicle type - Tonnes of CO₂-eq emitted by transport sector - Median age of vehicles in Lebanon - % of vehicles with engines exceeding 2 liters - Share of public transport (passenger-kilometer activity) - Share of fuel-efficient vehicles - Share of large low efficiency vehicles - Share of hybrid vehicles - Total fuel subsidies (USD) per year <p>NAMA Parameters:</p> <ul style="list-style-type: none"> - Money spent on training on and marketing of the scrappage program - Emission limit for newly imported cars legally enacted Y/N - Environmental standard for all newly imported cars is legally implemented - Y/N - Amount of additional fuel tax collected - Number of FEV;s joining the scrappage program of plate color p in year y, focusing on RP vehicles - Monetary values of financial incentives disbursed on a national level - Amount of replacement fees disbursed as part of the scrappage programs 	

Annex III: SDG List

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">PEOPLE</p>	<p>1 NO POVERTY</p>  <p>Goal 1. End poverty in all its forms everywhere</p>	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day
		1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
		1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable
		1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance
		1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters
		1.a Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions
		1.b Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">PEOPLE</p>	<p>2 ZERO HUNGER</p>  <p>Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture</p>	2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round
		2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons
		2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment
		2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality
		2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed
		2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries
		2.b Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round
		2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility

3 GOOD HEALTH AND WELL-BEING



Goal 3.
Ensure healthy lives and promote well-being for all at all ages

- 3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births
- 3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births
- 3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases
- 3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being
- 3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol
- 3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents
- 3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes
- 3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all
- 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
- 3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate
- 3.b Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all
- 3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States
- 3.d Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks

4 QUALITY EDUCATION



Goal 4.
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

- 4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes
- 4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education
- 4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university
- 4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship
- 4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations
- 4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy
- 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development
- 4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all
- 4.b By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries
- 4.c By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States

PEOPLE

5 GENDER EQUALITY



Goal 5.
Achieve gender equality and empower all women and girls

- 5.1 End all forms of discrimination against all women and girls everywhere
- 5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation
- 5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation
- 5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate
- 5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life
- 5.6 Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences
- 5.a Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws
- 5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women
- 5.c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels

PEOPLE

10 REDUCED INEQUALITIES



Goal 10.
Reduce inequality within and among countries

- 10.1 By 2030, progressively 10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average of the population at a rate higher than the national average
- 10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status
- 10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard
- 10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality
- 10.5 Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations
- 10.6 Ensure enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions in order to deliver more effective, credible, accountable and legitimate institutions
- 10.7 Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies
- 10.a Implement the principle of special and differential treatment for developing countries, in particular least developed countries, in accordance with World Trade Organization agreements
- 10.b Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, small island developing States and landlocked developing countries, in accordance with their national plans and programmes
- 10.c By 2030, reduce to less than 3 per cent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 per cent

PLANET

6 CLEAN WATER AND SANITATION



Goal 6.
Ensure availability and sustainable management of water and sanitation for all

- 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all
- 6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
- 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity
- 6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate
- 6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes
- 6.a By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies
- 6.b Support and strengthen the participation of local communities in improving water and sanitation management

PLANET

7 AFFORDABLE AND CLEAN ENERGY



Goal 7.
Ensure access to affordable, reliable, sustainable and modern energy for all

- 7.1 By 2030, ensure universal access to affordable, reliable and modern energy services
- 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
- 7.3 By 2030, double the global rate of improvement in energy efficiency
- 7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology
- 7.b By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Goal 12.
Ensure sustainable consumption and production patterns

- 12.1 Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries
- 12.2 By 2030, achieve the sustainable management and efficient use of natural resources
- 12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses
- 12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment
- 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
- 12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle
- 12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities
- 12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature
- 12.a Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production
- 12.b Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products
- 12.c Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities

13 CLIMATE ACTION



Goal 13.
Take urgent action to combat climate change and its impacts

- 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
- 13.2 Integrate climate change measures into national policies, strategies and planning
- 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
- 13.a Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible
- 13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities



Goal 14.
Conserve and sustainably use the oceans, seas and marine resources for sustainable development

- 14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution
- 14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans
- 14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels
- 14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics
- 14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information
- 14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation
- 14.7 By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism
- 14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries
- 14.b Provide access for small-scale artisanal fishers to marine resources and markets
- 14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want



Goal 15.
Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

- 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements
- 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally
- 15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world
- 15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development
- 15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species
- 15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed
- 15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products
- 15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species
- 15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts
- 15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems
- 15.b Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation
- 15.c Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities

8 DECENT WORK AND ECONOMIC GROWTH



Goal 8.
Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

- 8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries
- 8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors
- 8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services
- 8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead
- 8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value
- 8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training
- 8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms
- 8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment
- 8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products
- 8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all
- 8.a Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries
- 8.b By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Goal 9.
Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

- 9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
- 9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries
- 9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets
- 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities
- 9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending
- 9.a Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States
- 9.b Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities
- 9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

11 SUSTAINABLE CITIES AND COMMUNITIES



Goal 11.
Make cities and human settlements inclusive, safe, resilient and sustainable

- 11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
- 11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons
- 11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries
- 11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage
- 11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations
- 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management
- 11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities
- 11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning
- 11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels
- 11.c Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials

16 PEACE, JUSTICE AND STRONG INSTITUTIONS



Goal 16.
Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

- 16.1 Significantly reduce all forms of violence and related death rates everywhere
- 16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children
- 16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all
- 16.4 By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime
- 16.5 Substantially reduce corruption and bribery in all their forms
- 16.6 Develop effective, accountable and transparent institutions at all levels
- 16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels
- 16.8 Broaden and strengthen the participation of developing countries in the institutions of global governance
- 16.9 By 2030, provide legal identity for all, including birth registration
- 16.10 Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements
- 16.a Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence & combat terrorism & crime
- 16.b Promote and enforce non-discriminatory laws and policies for sustainable development

17 PARTNERSHIPS FOR THE GOALS



Goal 17.
Strengthen the means of implementation and revitalize the global partnership for sustainable development

17.1 Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection
17.2 Developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to achieve the target of 0.7 per cent of ODA/GNI to developing countries and 0.15 to 0.20 per cent of ODA/GNI to least developed countries; ODA providers are encouraged to consider setting a target to provide at least 0.20 per cent of ODA/GNI to least developed countries
17.3 Mobilize additional financial resources for developing countries from multiple sources
17.4 Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress
17.5 Adopt and implement investment promotion regimes for least developed countries
17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism
17.7 Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed
17.8 Fully operationalize the technology bank and science, technology and innovation capacity building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology
17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation
17.10 Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organization, including through the conclusion of negotiations under its Doha Development Agenda
17.11 Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020
17.12 Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with World Trade Organization decisions, including by ensuring that preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access
17.13 Enhance global macroeconomic stability, including through policy coordination and policy coherence
17.14 Enhance policy coherence for sustainable development
17.15 Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development
17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries
17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships
17.18 By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts
17.19 By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries

Annex IV: Transport Strategy

Recommendation/ Intervention	Primary SDG Targets	SCAN Tab	SDG	SDG Target (blue = primary SDG target alignment)	SCAN Category	Action	Link +/-	Description of Link	Primary Source	Secondary Source
<p>1. Promote and improve sustainable public transport system with better and safer access, more frequent and better quality services and facilities.</p> <p>3. Promote shift towards public transport, decrease the cost, better management on traffic, safety, mobility, productivity, energy, environment, and user satisfaction.</p> <p>5. Increase mass transport capacity to compete with private cars, and greater mobility options particularly for those who do not have a car.</p> <p>9. Increase the Safety and easier cycling and walking (Soft movement), and Reduce traffic congestion in dense residential and commercial regions.</p>	3.6 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	Transport	3.4	By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	Changing activity	Modal share shift		Improves mental health and well-being by reduced traffic-related stress and reduces air pollution, except when shifting to bioenergy	SCAN	
	3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	Transport	3.6	By 2020, halve the number of global deaths and injuries from road traffic accidents	Changing activity	Modal share shift		Improves road safety and decreases number of global deaths and injuries from road traffic accidents by reducing number of vehicles	SCAN	
	8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors	Transport	3.9	By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	Changing activity	Modal share shift		Reduces air pollution from reduced fuel use	SCAN	
	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	Transport	3.9	By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	Changing activity	Modal share shift		A pedestrian friendly environment supports walking and healthier lifestyles.	LOCAL EXPERT	
	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities	Transport	4.7	By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	Changing activity	Modal share shift		Awareness raising campaigns would improve road safety and promote behavior change (modal shift)	LOCAL EXPERT	
	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	Transport	5.1	5.1 End all forms of discrimination against all women and girls everywhere	Changing activity	Modal share shift		Increased mobility through mass transit designed with gender in mind can increase access to opportunity and improve safety for women	LOCAL EXPERT	
	11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	Transport	6.4	By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	Changing activity	Modal share shift		Reduces water use (lifecycle water use from liquid fuel extraction and refining)	SCAN	
	11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning	Transport	6.6	By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	Changing activity	Modal share shift		Supports conservation of water ecosystems through reduced fuel related lifecycle water consumption	SCAN	
	11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	Transport	7.3	7.3 By 2030, double the global rate of improvement in energy efficiency	Changing activity	Modal share shift		More efficient transportation options and engines will decrease GHG emissions	LOCAL EXPERT	
	12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	Transport	8.2	Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors	Changing activity	Modal share shift		Modal share shift can increase economic productivity due to shorter travel, and contributes to technological and infrastructure upgrading, and to economic diversification and innovation	SCAN	
		Transport	8.3	Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services	Changing activity	Modal share shift		Implementation of mass transit schemes can support decent job creation among supply chain for construction and operation	SCAN	
		Transport	8.4	Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead	Changing activity	Modal share shift		Increases resource efficiency (depends on modes of transport) and contributes to decoupling growth from environmental degradation	SCAN	
		Transport	8.5	By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	Changing activity	Modal share shift		Supports decent job creation through major infrastructure development and then operation	SCAN	
		Transport	8.5	By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	Changing activity	Modal share shift		Potential job losses in personal vehicle value chain (manufacture of cars, servicing, petrol stations)	SCAN	
		Transport	8.8	Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment	Changing activity	Modal share shift		Reduces unsafe jobs related to oil extraction and processing (drilling, refinery etc.)	SCAN	
	Transport	9.1	Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	Changing activity	Modal share shift		Modal share shift requires and supports development of sustainable, affordable and accessible transport infrastructure (national, regional, international)	SCAN		

Transport	9.2	Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries	Changing activity	Modal share shift		Development of new mass transit infrastructure creates industrial opportunities and supports industrialisation across the supply chain	SCAN	
Transport	9.4	By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities	Changing activity	Modal share shift		Increases resource efficiency in the transport industry and contributes to infrastructure upgrading	SCAN	
Transport	9.5	Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending	Changing activity	Modal share shift		Development and operation of mass transit transport supports development of new vehicles and infrastructure and supports upgrading of technological capability in relevant industry sectors	SCAN	
Transport	10.1	By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average	Changing activity	Modal share shift		Increases access of population living outside the city to economic activities in the centre	SCAN	
Transport	11.2	By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	Changing activity	Modal share shift		Increased public transport, increases sustainable transport and improves road safety due to modal shift (fewer cars) and improved infrastructure	SCAN	
Transport	11.3	By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries	Changing activity	Modal share shift		Increases sustainable urbanization and sustainable human settlement planning and management through integration of mass transport systems	SCAN	
Transport	11.4	Strengthen efforts to protect and safeguard the world's cultural and natural heritage	Changing activity	Modal share shift		Improves ecosystem and habitat conservation due to reduced pollution and land use activities	SCAN	
Transport	11.6	By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	Changing activity	Modal share shift		Reduces air pollution and improves ecosystem and habitat conservation due to reduced pollution and land use activities	SCAN	
Transport	11.a	Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning	Changing activity	Modal share shift		Increased mobility supports increased access to opportunity and interconnectedness across geographies (urban, peri-urban and rural)	LOCAL EXPERT	
Transport	11.b	11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	Changing activity	Modal share shift		A modal share shift promotes an integrated approach, that is resource efficient and mitigates the impact of climate change	LOCAL EXPERT	
Transport	12.2	By 2030, achieve the sustainable management and efficient use of natural resources	Changing activity	Modal share shift		Increases resource efficiency (more efficient / reduced use of fossil fuels for transport)	SCAN	
Transport	12.4	By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment	Changing activity	Modal share shift		Contributes to reduced outdoor air pollution and reduces water pollution (run-off) from reduced personal vehicle use	SCAN	
Transport	14.1	By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	Changing activity	Modal share shift		Reduces water pollution (run-off from road surfaces) which can end up in marine environment	SCAN	
Transport	14.1	By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	Changing activity	Modal share shift		Reduces oil consumption (oil extraction associated with oil spills/water pollution)	SCAN	

		Transport	15.1	By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Changing activity	Modal share shift		Improves conservation of water ecosystems and improves ecosystem and habitat conservation due to reduced pollution and land use activities	SCAN	
		Transport	15.5	Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	Changing activity	Modal share shift		Reduces degradation of natural habitats through reduced pollution	SCAN	
2. Create a transport system that is consistent with the real needs of people living in different parts of Lebanon and with different abilities to afford travel.	8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries	Transport	1.1	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day	Changing activity	Reducing transport demand		Public transit can increase access to economic activities and income generation	LOCAL EXPERT	
4. Minimize urban transport travel time and improve journey time reliability on all land transportation modes	8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors	Transport	1.2	1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	Changing activity	Reducing transport demand		Public transit can increase access to economic activities and income generation	LOCAL EXPERT	
7. Ensure transport accessibility to disadvantaged areas, and reduce negative impacts.	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	Transport	1.4	1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	Changing activity	Reducing transport demand		Public transit can increase mobility and access to resources: schools, hospitals, jobs, shopping, etc.	LOCAL EXPERT	
	10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status	Transport	1.5	1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	Changing activity	Reducing transport demand		Access to public transit that increases mobility may support resilience during extreme events	LOCAL EXPERT	
	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	Transport	3.4	By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	Changing activity	Reducing transport demand		Improved transport mobility/accessibility can bring people closer to jobs, school and other amenities thus reducing fuel use, water pollution (run-off from road surfaces) and improves mental health and well-being by reduced traffic-related stress and noise	LOCAL EXPERT	
	11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning	Transport	3.6	By 2020, halve the number of global deaths and injuries from road traffic accidents	Changing activity	Reducing transport demand		Improved transport mobility/ accessibility means less VMT thus decreases number of global deaths and injuries from road traffic accidents due to improved road safety from reduced traffic levels	LOCAL EXPERT	
	11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	Transport	3.9	By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	Changing activity	Reducing transport demand		Improved transport mobility/accessibility can bring people closer to jobs, school and other amenities thus reducing fuel use, water pollution (run-off from road surfaces) and improves mental health and well-being by reduced traffic-related stress and n	LOCAL EXPERT	
	16.6 Develop effective, accountable and transparent institutions at all levels	Transport	6.3	By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	Changing activity	Reducing transport demand		Improved transport mobility/accessibility means less VMT thus reduces water pollution (run-off from road surfaces)	LOCAL EXPERT	
		Transport	6.4	By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	Changing activity	Reducing transport demand		Improved transport mobility/accessibility means less VMT thus reduces water use (lifecycle water use from liquid fuel extraction and refining)	LOCAL EXPERT	
		Transport	6.6	By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	Changing activity	Reducing transport demand		Improved transport mobility/accessibility means less VMT which supports conservation of water ecosystems through reduced fuel related lifecycle water consumption	LOCAL EXPERT	
		Transport	8.1	Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries	Changing activity	Reducing transport demand		Increases economic growth due to people being able to save commuting time which they can spend in their businesses	SCAN	Expert judgement

Transport	8.2	Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors	Changing activity	Reducing transport demand		Technologies to avoid travel (ICT etc) can increase economic productivity, contribute to technological and infrastructure upgrading and innovation	SCAN	Expert judgement
Transport	8.4	Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead	Changing activity	Reducing transport demand		Improved transport mobility/accessibility means less VMT which increases resource efficiency and contributes to decoupling growth from environmental degradation	LOCAL EXPERT	
Transport	8.8	Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment	Changing activity	Reducing transport demand		Improved transport mobility/accessibility means less VMT which can reduce unsafe jobs related to oil extraction and processing (drilling, refinery etc)	LOCAL EXPERT	
Transport	9.1	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	Changing activity	Reducing transport demand		Providing reliable and accessible transport to all parts of the country supports economic development and human well-being through increased mobility for all	LOCAL EXPERT	
Transport	10.2	10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status	Changing activity	Reducing transport demand		Increased mobility means more equitable access to opportunity - jobs, schools, hospitals and other resources	LOCAL EXPERT	
Transport	11.2	By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	Changing activity	Reducing transport demand		Supports sustainable transport and increases road safety (fewer cars)	SCAN	Expert judgement
Transport	11.a	Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning	Changing activity	Reducing transport demand		Strengthening urban-rural linkages through enhanced public transit and increased mobility and reducing travel times	LOCAL EXPERT	
Transport	11.b	11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	Changing activity	Reducing transport demand		Integrated public transit systems increase resource efficiency and adaptation and mitigation capacity to climate change	LOCAL EXPERT	
Transport	11.3	By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries	Changing activity	Reducing transport demand		Increases sustainable urbanization and sustainable human settlement planning and management	SCAN	Expert judgement
Transport	11.4	Strengthen efforts to protect and safeguard the world's cultural and natural heritage	Changing activity	Reducing transport demand		Improves ecosystem and habitat conservation due to reduced pollution and land use activities	SCAN	Expert judgement
Transport	11.6	By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	Changing activity	Reducing transport demand		Reduces outdoor air pollution and improves ecosystem and habitat conservation due to reduced pollution and land use activities	SCAN	Expert judgement
Transport	12.2	By 2030, achieve the sustainable management and efficient use of natural resources	Changing activity	Reducing transport demand		Increases resource efficiency (more efficient / reduced use of fossil fuels for transport)	SCAN	Expert judgement
Transport	12.4	By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment	Changing activity	Reducing transport demand		Contributes to reduced outdoor air pollution and reduces water pollution (run-off)	SCAN	Expert judgement
Transport	12.6	Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle	Changing activity	Reducing transport demand		Can support companies to adopt sustainable practices e.g. flex working, ICT networks	SCAN	Expert judgement

		Transport	14.1	By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	Changing activity	Reducing transport demand		Reduces water pollution (run-off from road surfaces) which can end up in marine environment	SCAN	Expert judgement
		Transport	15.1	By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Changing activity	Reducing transport demand		Improved public transport mobility/accessibility improves conservation of water ecosystems and improves ecosystem and habitat conservation due to reduced pollution and land use activities	LOCAL EXPERT	
		Transport	15.5	Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	Changing activity	Reducing transport demand		Improved transport mobility/accessibility means less passenger vehicle miles travelled which reduces degradation of natural habitats through reduced pollution and reduced land use	LOCAL EXPERT	
		Transport	16.6	Develop effective, accountable and transparent institutions at all levels	Changing activity	Reducing transport demand		Develop institutional capacity and enact regulations and legislation necessary for effective and transparent institutions	LOCAL EXPERT	
6. Develop sufficient institutional human capital to drive the vision of transport; and a transport response that supports Land transport development.	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	General	4.4	By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	Capacity	Training programmes		Institutional capacity development in transport will increase skills base	LOCAL EXPERT	
8. Provide key-indicators to transportation planners and decision makers to facilitate the movement of people and freight	11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries 11.6 By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels 16.6 Develop effective, accountable and transparent institutions at all levels	General	8.6	By 2020, substantially reduce the proportion of youth not in employment, education or training	Capacity	Training programmes		Institutional capacity development in transport can help provide opportunities for young people	LOCAL EXPERT	
		General	11.2	By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	Capacity	Institutional capacity building		Key-indicators to support transport planners and decision makers to facilitate the movement of people and freight	LOCAL EXPERT	
		General	11.3	By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries	Capacity	Institutional capacity building		Capacity building approaches as part of mitigation policy in urban environments would develop relevant skills and capabilities in city government institutions	SCAN	Expert judgement
		General	11.b	By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	Capacity	Institutional capacity building		Integrated planning and utilization of key-indicators to support transport planners and decision makers to facilitate the movement of people and freight	LOCAL EXPERT	
		General	16.6	Develop effective, accountable and transparent institutions at all levels	Capacity	Institutional capacity building		Development of institutions and governance processes for climate change should support development of general governance capacities	SCAN	Expert judgement
				Transport	1.1	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day	Vulnerability	Technological improvement to increase resilience		Improved road and rail network facilitates travel connectivity and improved income flows, as well as ease and possibility of emergency response groups to provide immediate support through relief goods, rescue operations, etc
10. Improve and better maintain road and rail network, facilitate traffic in order to provide enhanced access to strategic national area.	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all 10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status 11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management 11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning 11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	Transport	1.2	1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	Vulnerability	Technological improvement to increase resilience		Improved road and rail network facilitates travel connectivity and improved income flows, as well as ease and possibility of emergency response groups to provide immediate support through relief goods, rescue operations, etc	MODIFIED FROM SCAN	
		Transport	1.4	1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	Vulnerability	Technological improvement to increase resilience		Improved road and rail network facilitates travel connectivity and improved income flows, as well as ease and possibility of emergency response groups to provide immediate support through relief goods, rescue operations, etc	MODIFIED FROM SCAN	
		Transport	1.5	1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	Vulnerability	Technological improvement to increase resilience		Improved road and rail network facilitates travel connectivity and improved income flows, as well as ease and possibility of emergency response groups to provide immediate support through relief goods, rescue operations, etc	MODIFIED FROM SCAN	
		Transport	2.1	2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	Vulnerability	Technological improvement to increase resilience		Improved road and rail network facilitates travel connectivity and improved income flows, as well as ease and possibility of emergency response groups to provide immediate support through relief goods, rescue operations, etc	MODIFIED FROM SCAN	
		Transport	2.2	2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons	Vulnerability	Technological improvement to increase resilience		Improved road and rail network facilitates travel connectivity and improved income flows, as well as ease and possibility of emergency response groups to provide immediate support through relief goods, rescue operations, etc	MODIFIED FROM SCAN	

Transport	3.1	3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	Vulnerability	Technological improvement to increase resilience	Lower costs of acquiring health services through lower travel costs and ease in connectivity; as well as easier reach for emergency response	SCAN	Expert judgement
Transport	3.2	3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	Vulnerability	Technological improvement to increase resilience	Lower costs of acquiring health services through lower travel costs and ease in connectivity; as well as easier reach for emergency response	SCAN	Expert judgement
Transport	3.6	3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents	Vulnerability	Technological improvement to increase resilience	Climate-resilient roads reduce the likelihood of accidents (e.g., due to potholes, etc.) during extreme events (eg., flooding, heavy rainfall that causes lower visibility)	SCAN	Expert judgement
Transport	3.8	3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all	Vulnerability	Technological improvement to increase resilience	Providing access to health services through road connectivity; as well as easier reach for emergency response	SCAN	Expert judgement
Transport	4.1	4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes	Vulnerability	Technological improvement to increase resilience	Increase in access to educational facilities, which could cover a wider range of communities per school and lower travel time; and reduce road destruction related school interruptions	SCAN	Expert judgement
Transport	4.6	4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy	Vulnerability	Technological improvement to increase resilience	Increase in access to educational facilities, which could cover a wider range of communities per school and lower travel time; and reduce road destruction related school interruptions	SCAN	Expert judgement
Transport	8.1	8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries	Vulnerability	Technological improvement to increase resilience	Increased road connectivity support economic growth	SCAN	Expert judgement
Transport	8.8	8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment	Vulnerability	Technological improvement to increase resilience	Increased road connectivity and climate-resilient transport systems protect workers from health risks of climate change (e.g., flooding, extreme heat)	SCAN	Expert judgement
Transport	9.1	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	Vulnerability	Technological improvement to increase resilience	Increasing percentage of climate-resilient roads correspond to SDG indicator 9.1.1 Proportion of rural population who live within 2km of an all-season road	SCAN	Hammill and Price-Kelly (2017)
Transport	10.2	10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status	Vulnerability	Technological improvement to increase resilience	Improved mobility in strategic national areas promotes more equal access to resources	LOCAL EXPERT	
Transport	11.2	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	Vulnerability	Technological improvement to increase resilience	Reducing urban heat island effect with climate adapt transport designs and cool pavements	SCAN	Expert judgement
Transport	11.6	11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	Vulnerability	Technological improvement to increase resilience	Improved mobility reduces the environmental impact of transport on cities	LOCAL EXPERT	
Transport	11.a	11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning	Vulnerability	Technological improvement to increase resilience	Improved mobility between urban, peri-urban and rural supports more positive economic and environmental linkages	LOCAL EXPERT	
Transport	11.b	11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	Vulnerability	Technological improvement to increase resilience	Integrated transport planning toward resources efficiency, climate and disaster resiliency	LOCAL EXPERT	
Transport	17.1	17.1 Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection	Vulnerability	Technological improvement to increase resilience	Funding plans that support the mobilization of domestic and international resources in the expansion of the road and rail network to strategic areas	LOCAL EXPERT	
Transport	17.14	17.14 Enhance policy coherence for sustainable development	Vulnerability	Technological improvement to increase resilience	Regulation and legislation can enhance policy coherence making transportation initiatives more viable	LOCAL EXPERT	
Transport	17.17	17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships	Vulnerability	Technological improvement to increase resilience	Private sector participation in land transport could be a source of multiple benefits to both the Government and users	LOCAL EXPERT	

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