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Strategic questions of a horizontal and cross-sectoral policy or regulatory nature:

Analytical work on transport

Development of Sustainable Inland Transport Connectivity Indicators – 2020 Progress Report

Note by the secretariat

I. Background

1. A United Nations Development Account (UNDA) funded project entitled “Sustainable transport connectivity and implementation of transport related SDGs in selected landlocked and transit/bridging countries” is currently being implemented. The project is led by the UNECE Sustainable Transport Division and implemented with the support of relevant departments in two UN sister regional commissions: the Economic and Social Commission for Western Asia (ESCWA) and the Economic Commission for Latin America and the Caribbean (ECLAC). It aims at developing a set of Sustainable Inland Transport Connectivity Indicators (SITCIN). In the first phase, the project involves the following pilot countries: Georgia, Kazakhstan, Serbia, Jordan and Paraguay.

Figure I

UNECE Sustainable Transport Division is leading the SITCIN project



II. Objective

2. The main objective of the project is to develop a tool enabling countries to measure their degree of transport connectivity: both domestically & bilaterally/sub-regionally as well as in terms of soft & hard infrastructure.
3. *Inter alia*, the SITCIN, once fully developed and tested in the five pilot countries, will provide an instrument (a measurable set of criteria) for Governments enabling them to evaluate/ assess:
 - The extent to which they implement the relevant United Nations legal instruments, agreements and conventions effectively; and
 - The degree to which their inland transport systems are inter-operable with the systems within their respective (sub-)regions.
4. In doing so, it should enable policy-makers to assess their country's degree of external economic connectivity in terms of efficiency of inland transport, logistics, trade, customs and border crossing facilitation processes. Governments could also use the SITCIN to assess and report on their progress in implementing the transport related Sustainable Development Goals (i.e. 2030 Agenda) and their commitments under the Vienna Programme of Action for Landlocked Developing Countries (for the decade 2014–2024).

III. Project phases

- I. Development of the initial set of Sustainable Inland Transport Indicators (SITCIN)
- II. Fact-finding missions to each of the five “pilot countries” to review national transport and logistics situation, resulting in five «national connectivity reports»
- III. National policy dialogue meetings to validate the reports
- IV. Tailor-made national capacity building programmes in each of the five “pilot countries”
- V. Concluding inter-regional forum to share “lessons learnt’ and experiences of the five pilot countries with other interested Governments around the globe to further promote the use of the SITCIN.

IV. SITCIN methodology

5. The current draft indicators are structured within three pillars of sustainability and applied across the four inland transport sectors including, road, rail, inland waterways and inter-modal transport:
 - **Economic Sustainability** (validating border crossing efficiency, time, and costs as well as quality of (inter-modal) infrastructure and the use of ICT and intelligent transport solutions).
 - **Social Sustainability** (assessing adequacy of road traffic rules enforcement, road traffic infrastructure, vehicle regulations and administrative frameworks surrounding cross border transport of perishable foodstuffs and of dangerous goods).
 - **Environmental Sustainability** (evaluating measures aimed at reduction of greenhouse gas emissions, air pollutants and noise emissions (looks into alternative fuel share and average age of the vehicle fleet etc.).

Figure II

The SITCIN are structured along the three pillars of sustainable development: economic, social and environmental sustainability



V. SITCIN project management team

6. The project is led by the UNECE Sustainable Transport Division and implemented with the support of relevant departments in two sister regional commissions, ESCWA and ECLAC. In 2019 and 2020, the project employed a group of nine consultants (one international consultant, and two national consultants each in Georgia, Kazakhstan and Serbia, followed by one national consultant each in Jordan and Paraguay).

VI. Progress made to date

A. Development of the initial set of Sustainable Inland Transport Indicators (SITCIN)

7. A comprehensive set of 230 Sustainable Inland Transport Connectivity Indicators (SITCIN) covering road, rail, inland waterway and inter-modal transport has been prepared in the framework of the project. In 2020 an additional set of “pandemic resilience” indicators has been developed in response to the impact of COVID-19 on international transport systems. This additional cluster of indicators has been designed for countries to be able to assess their transport system preparedness for and resilience to pandemics and other cross-border emergencies.

8. A SITCIN data collection template model has been produced and is available as of November 2019. In 2020, a template for an online/ web-based data collection model has been developed to be finalized and operationalized in the course of 2021. This web-based data collection model will be a key element of the sustainability of the project as it makes the utilisation of the SITCIN as an instrument for Governments to measure progress much more user-friendly.

9. At the end of the project, the full set of SITCIN (including a complete set of definitions and detailed guidance on the ranking system) will be officially published.

B. Country field visits conducted

10. In the course of 2019-2020, field visits to the five beneficiary countries have been conducted. During each of these missions, extensive consultations took place with the

Government agencies in charge of transport, trade, customs and border management issues, as well as road and railway transport infrastructure managers and haulers including also representatives of logistics and freight forwarding associations and transporters. These consultations were combined with on-site visits to (rail and road) border crossing points, inland customs clearance and logistics centres and other locations of strategic importance to the respective country's external economic/ transport connectivity situation. See an overview below in Table I.

11. The purpose of these initial scoping missions was two-fold:

(a) To present the SITCIN project to national stakeholders, explain the methodology, structure and rationale for the project and gather initial views and feedback on the applicability of the indicators in the respective national context; and

(b) To collect data and information needed to validate the indicators, attribute a scoring and in doing so develop a comprehensive overview of the country's degree of transport connectivity, e.g., through:

(i) Evaluating the institutional and legal set-up as well as the regulatory and administrative environment related to border crossings, customs and transit procedures.

(ii) Appraising the quality of the administrative framework (including consignment and transport documentation regimes) surrounding road, rail, inland waterway and inter-modal transport.

(iii) Analysing the quality and effectiveness of transport and logistics infrastructure.

(iv) Determining the robustness of the road traffic management and road traffic infrastructure system.

(v) Validating the quality of the regulatory framework surrounding transport of dangerous goods and perishable foodstuffs by road, rail and inland waterways.

(vi) Evaluating efforts aimed at reduction of greenhouse gases, age and maintenance of the road vehicle fleet and air and noise emissions.

(vii) Etc.

Table I

<i>Beneficiary</i>	<i>Date</i>	<i>Field visits</i>	<i>UN entity</i>
Georgia	1-5 July 2019	Government stakeholder consultations in Tbilisi followed by visits to the border with Armenia (Sadakhlo-Bagratashen road and rail BCP)/ Border with Azerbaijan ("Red Bridge", near Kirach-Mughanlo) and "Gardabani" rail BCP as well as visit to the inland customs clearance and logistics zone near Tbilisi.	ECE
Kazakhstan	9-13 September 2019	Government consultations in Nur-Sultan, followed by private sector consultations in Almaty and a visit to Khorgos Eastern Gate SEZ at the Kazakh-Chinese border, which aims at providing a full range of logistics services for railway cargo between China, Central Asia and Europe. The SEZ consists of a dry port with a terminal capacity of 540,000 TEUs/year and a container yard with	ECE

<i>Beneficiary</i>	<i>Date</i>	<i>Field visits</i>	<i>UN entity</i>
		six railway lines (both narrow and wide railway tracks enabling inter-operability between the two states).	
Serbia	18-20 September 2019	Government and private sector consultations in Belgrade, followed by assessment visits to the inland waterway border clearance facilities in Novi Sad, the Horgos (road) and Subotica (rail) BCPs with Hungary and the Batrovci (road) and Sid (rail) BCPs with Croatia.	ECE
Jordan	6-9 October 2019	Government and private sector consultations followed by visits to the Amman (inland) Customs Clearance Centre, the Umari land border crossing between Jordan and Saudi Arabia and the Aqaba Special Economic Zone (SEZ), incl. a visit to the Aqaba Container Terminal which handles over 800,000 containers (TEU) annually as well as the Aqaba Port Authority, the Freight Logistics Village and the fully automated Truck Control System (TCS) operations centre managing the movement of commercial trucks entering and leaving the SEZ.	ESCWA/ ECE
Paraguay	10-14 February 2020	Visits to the "José Falcón - Clorinda" and the "Ciudad del Este - Foz do Iguacu" land border crossing points between Paraguay and Argentina and Paraguay and Brazil.	ECLAC/ ECE

C. SITCIN data collection and adoption of National Connectivity Reports

12. Building further on the established public and private sector contacts and the preliminary data gathered during the initial in-country visits, the team of national consultants in each of the five beneficiary countries continued its data collection efforts required to be able to validate and assess the usability of the SITCIN. Based on a pre-agreed template the team then compiled draft National Connectivity Reports (NCRs) in each pilot country which were subsequently translated into national languages and submitted for endorsement at a series of National Policy Dialogue sessions either already held in 2020 or still planned for 2021. Table II below provides an overview of past and upcoming meetings.

Table II

<i>Beneficiary</i>	<i>Venue/ Date</i>	<i>Activity</i>	<i>UN entity</i>
Georgia	Tbilisi, 10-11 March 2020	2-day National Policy Dialogue session followed by final endorsement of the National Connectivity Report and selection of	ECE

<i>Beneficiary</i>	<i>Venue/ Date</i>	<i>Activity</i>	<i>UN entity</i>
		a number of transport system priority areas in need of capacity building.	
Kazakhstan	Nur-Sultan/ virtual, 4-5 March 2021	2-day National Policy Dialogue session	ECE
Serbia	Belgrade/ virtual 18-19 March 2021	2-day National Policy Dialogue session	ECE
Jordan	Amman/ virtual 31 March/ 1 April 2021	2-day National Policy Dialogue session	ESCWA/ ECE
Paraguay	Asuncion/ virtual April/ May 2021(tbc)	2-day National Policy Dialogue session	ECLAC/ ECE

13. Each of the National Connectivity Reports (NCRs) has been developed on the basis of a pre-agreed template, consisting of the following components:

1. Introduction (summary of activities undertaken to develop the NCR)
2. Country information:
 - 2.1 General (population size and density, size of the country, GDP etc.)
 - 2.2 Transport system specifics (transport corridors it is part of, length and characteristics of inland transport networks etc.)
3. Position of the country in the regional/ international trade system
4. Sustainable Inland Transport Indicators (SITCIN): score assignment
(Explanation of the process: self-assessment, stakeholders' interviews (identification of the interviewees), surveys (type of surveys conducted, the capacity, role and number of respondents))
5. SITCIN clusters:
 - 5.1 **Border crossing efficiency:** This indicator is an aggregate of Efficiency, Time required at borders, Cost, Operations and ICT and Intelligent Transport System Solutions indicators grouped under the Economic pillar.
 - 5.2 **Transport infrastructure:** This indicator refers to the Infrastructure indicator under the Economic pillar and to the Road Traffic Infrastructure, Rail Traffic Infrastructure and IWW Traffic Infrastructure indicators under the Social pillar of SITCIN, to measure the availability, quality and safety of transport infrastructure in the country.
 - 5.3 **Safety and security:** This cluster is an aggregate of the Road Traffic Rules/Behavior, Vehicle Regulations, IWW Traffic Rules and Vessels Regulations indicators under the Social pillar of SITCIN, to measure the extent to which safety and security of international transport in the country are maintained.
 - 5.4 **Transport of perishable foodstuffs and dangerous goods:** This indicator refers to the Perishable Foodstuffs Transport and Dangerous Goods Transport under the Social pillar of SITCIN, to measure the extent to which safety of transporting perishable foodstuffs and dangerous goods is maintained.
 - 5.5 **Intermodality:** This indicator refers to the Intermodality indicator under the Economic pillar of SITCIN, to measure the modal share of freight transport and share of multimodal/intermodal/combined cargo.

5.6 Environment and energy: This indicator refers to the Environmental pillar of SITCIN, to assess the extent to which a sustainable fleet is being deployed and the extent to which emission-reduction measures are applied.

6. A country-specific SWOT analysis.

7. A proposal for a national capacity building programme based on the identified needs.

14. The national gaps and weaknesses identified after having tested the indicators in the national context of the beneficiary/ pilot country and documented in detail in each of the five National Connectivity Reports serve as the basis for a series of ECE-led national capacity building programmes that will be developed and implemented to help remedy the identified shortcomings.

15. Based on the NCR findings for Georgia (March 2020) for instance tailored webinars will be held in order to grant public and private sector stakeholders:

- Access to best practices and policy instruments for promoting the development of intermodal infrastructure and services (PPP models, government incentives, etc.)
- Access to supply chain management and digital solutions in logistics;
- Access to best practices and policy instruments for promoting green transport and logistics;
- ADR¹ safety advisor training (transport of dangerous goods).
 - ADR safety provisions for tunnels

16. A first round of capacity-building will take place with stakeholders from Georgia on 10-12 March 2021 followed in April and May 2021 by a second round of virtual capacity building. Capacity building activities in the four other beneficiary countries will be implemented in Q2 and Q3 of 2021.

17. At the end of the project, all NCRs will be officially published in English and national languages.

¹ ADR, formally the Agreement of 30 September 1957 concerning the International Carriage of Dangerous Goods by Road, is a 1957ADR

VII. Review of indicators of achievement and activities

Table III

Review of agreed performance indicators (as per January 2021)

Expected Accomplishment	Indicator of Achievement at the start of the project (T0)	Indicator of achievement as per the project document	Indicator of Achievement at the time period considered (T1)	Comments
EA1 - Improved understanding of national transport stakeholders in identifying and assessing the most critical aspects of inland transport connectivity using a set of quantifiable and measurable Sustainable Inland Transport Indicators (SITCIN)	While the 5 pilot countries have a keen interest in measuring their degree of 'economic connectivity', none of them had a methodological approach to do so	IA 1.1 Five beneficiary countries endorsed and adopted a set of the sustainable inland transport connectivity indicators (SITCIN)	Partially achieved. Five beneficiary countries have used the set of sustainable inland transport connectivity indicators (SITCIN) their experience in doing so has been duly documented in the draft National Connectivity Reports, officially endorsed and adopted in 1 country (Georgia) with draft NCRs in the other 4 countries to be officially endorsed in March and April 2021.	<i>By the end of 2020, the SITCIN had been tested and validated in all 5 beneficiary countries. (draft) National Connectivity Reports (NCRs) were available in all 5 countries. While the NCR in Georgia has already been officially endorsed and adopted (in March 2020), the other 4 NCRs will be discussed and endorsed at virtual meetings during March and April 2021</i>
EA2 - Enhanced national capacities for developing evidence-based policies on inland transport connectivity, (based on the results of the SITCIN benchmarking exercise) to achieve transport-related (SDGs).	The five pilot countries all expressed a clear need to strengthen their national capacity to develop more effective inland transport policies.	IA 2.1 Five beneficiary countries adopted sustainable transport policy measures to improve inland transport connectivity.	Too early to validate this indicator/ Before being able to do so, all five National Policy Dialogue sessions would need to have taken place resulting in five officially endorsed NCRs.	<i>Only following implementation of all previous activities can the tailored capacity building events be initiated</i>

Table IV

Review of Project Activities and Status of implementation

Activity	Activity Status	Comment
A1.1 Conduct a meta-analysis of sustainable inland transport connectivity literature in Member States to identify and develop the initial set of SITCIN	<input type="checkbox"/> <i>Cancelled</i> <input type="checkbox"/> <i>Delayed</i> --- <input type="checkbox"/> <i>Not yet started</i> <input type="checkbox"/> <i>In progress</i> <input checked="" type="checkbox"/> <i>Completed</i>	Status: completed
A1.2 Organize five (one per beneficiary country) fact-finding missions by project teams to review the beneficiary country transport system information and statistics and gather views and approaches from competent national authorities and other relevant stakeholders	<input type="checkbox"/> <i>Cancelled</i> <input type="checkbox"/> <i>Delayed</i> --- <input type="checkbox"/> <i>Not yet started</i> <input type="checkbox"/> <i>In progress</i> <input checked="" type="checkbox"/> <i>Completed</i>	<p>Status: completed</p> <p><i>Fact-finding/ scoping missions have been held in all 5 beneficiary countries (Georgia, 1-5 July; Kazakhstan, 9-13 September; Serbia, 18-20 September; Jordan 6-9 October 2019; Paraguay February 2020).</i></p> <p><i>During each of the 5 scoping missions extensive consultations took place with the Government agencies in charge of transport, trade, customs and border management issues, as well as road and railway transport infrastructure managers and haulers including also representatives of logistics and freight forwarding associations and transporters. Lists of participants and interlocutors during each of the missions are available. The scoping missions also included visits to the main border crossings/ customs clearance points.</i></p> <p><i>As of early 2019, national consultants have been recruited in each of the 5 beneficiary countries to test the indicators and produce the National Connectivity Reports (NCRs). These consultants resumed their work in 2020.</i></p> <p><i>The NCRs should be available in a final format and adopted by national stakeholders at designated National Policy Dialogue sessions in Kazakhstan and Serbia (by 31 March 2021), Jordan (by 30 April 2021) and Paraguay (by 30 May 2021)</i></p>

<p>A.1.3 Prepare five national connectivity reports based on previous desktop research and fact-finding mission outcomes containing sustainable transport connectivity gap-analysis (using SITCIN) and recommendations on how to improve national transport policy. The report will comprise of inputs delivered by the national and international consultants/experts and compiled by the project teams in ECE, ECLAC and ESCWA staff. The reports will be published in English and translated in the respective national languages.</p>	<p><input type="checkbox"/> <i>Cancelled</i></p> <p><input type="checkbox"/> <i>Delayed</i></p> <p>---</p> <p><input type="checkbox"/> <i>Not yet started</i></p> <p><input type="checkbox"/> <i>In progress</i></p> <p><input checked="" type="checkbox"/> <i>Completed</i></p>	<p>Status: completed</p> <p><i>Connectivity reports have been prepared by the national consultants in all 5 beneficiary countries (based on a template/ outline prepared by the international consultant).</i></p> <p><i>NCR in Georgia is final and already endorsed by all stakeholders, NCRs for Serbia, Kazakhstan and Jordan are ready (soon to be endorsed) and a draft NCR for Paraguay is available and being reviewed by the project team. Translation in national languages is either already completed or well underway</i></p>
<p>A.2.1 Organize five (1 per country) policy dialogue meetings to discuss and validate the findings of the draft national connectivity reports. Policy dialogue will be combined with a capacity-building workshop to provide guidance on how to integrate recommendations into national connectivity reports. It will also be at this stage that the national work plans, and the sustainability plan will be discussed and agreed upon.</p>	<p><input type="checkbox"/> <i>Cancelled</i></p> <p><input type="checkbox"/> <i>Delayed</i></p> <p>---</p> <p><input type="checkbox"/> <i>Not yet started</i></p> <p><input checked="" type="checkbox"/> <i>In progress</i></p> <p><input type="checkbox"/> <i>Completed</i></p>	<p>Status: in progress</p> <p><i>Only after finalizing the NCR by the national consultants can the policy dialogue meetings be held during which the Government stakeholders are expected to adopt the findings of the indicators reflected in the NCRs.</i></p> <p><i>COVID-19 travel restrictions and tele-commuting arrangements put in place for public and private sector representatives in the five beneficiary countries have had a significant impact on the timely conduct of the foreseen policy dialogue meetings.</i></p> <p><i>Not only the already planned meetings for March/April and May 2020 had to be cancelled at short notice, in many cases the SITCIN data collection efforts were delayed significantly because officials were working from their home offices and did not always have access to the required data and information. In some cases, officials became even unavailable for any communication or coordination for extended periods.</i></p> <p><i>Virtual national policy dialogue sessions are now planned as follows: Kazakhstan (4-5 March 2021), Serbia (18-19 March 2021), Jordan (April 2021) and Paraguay (April 2021).</i></p> <p><i>Preparations for these national policy dialogues are already underway (including rental of web platforms and interpretation services; translation of the draft NCR reports in national languages etc.)</i></p>

<p>A 2.2 Organize five (1 per country) capacity-building workshops targeting the most pressing topics in inland transport policy development identified in national connectivity reports. Under the guidance of UNECE, ECLAC and ESCWA staff as well as international experts, recommendations will be formulated for the development of policy measures aimed at improving inland transport connectivity. The audience will consist of a group of selected representatives of national regulatory agencies, which participated in and contributed to the initial fact-finding missions and were identified as facing the most pertinent challenges.</p>	<p><input type="checkbox"/> Cancelled</p> <p><input type="checkbox"/> Delayed</p> <p>---</p> <p><input type="checkbox"/> Not yet started</p> <p><input checked="" type="checkbox"/> In progress</p> <p><input type="checkbox"/> Completed</p>	<p>Status: in progress</p> <p><i>Only after conducting the national policy dialogues and reaching agreement on the connectivity reports and the validity of the set of indicators can the actual capacity building workshops be organized.</i></p> <p><i>Capacity building workshop will be organized as follows: Georgia (10-12 March 2021), Kazakhstan (June 2021) Serbia June 2021), Jordan (October 2021) and Paraguay (November 2021).</i></p>
<p>A 2.3 Organize one inter-regional capacity building event, for representatives of UN Member States and the beneficiary countries to present the project achievements and lessons learnt, to discuss the role of SITCIN in monitoring the progress towards the transport-related SDG achievement and to promote expanding the use of the SITCIN beyond the beneficiary countries. The audience will consist of a group of beneficiary country representatives (from national regulatory agencies), which participated in and contributed to capacity building events and were identified as facing the most pertinent challenges. Furthermore, delegates from other UN Member States will be invited to join the event (covering their own costs).</p>	<p><input type="checkbox"/> Cancelled</p> <p><input type="checkbox"/> Delayed</p> <p>---</p> <p><input type="checkbox"/> Not yet started</p> <p><input checked="" type="checkbox"/> In progress</p> <p><input type="checkbox"/> Completed</p>	<p>Status: in progress</p> <p><i>This meeting will be held in the final quarter of 2021, either as a stand-alone event or b-t-b with an existing inter-governmental meeting.</i></p>
<p>A 2.4 Create and regularly maintain a web page providing an overview of project activities and intermediate (as well as) final results. This webpage will provide real-time, online access to the progress being made by the beneficiary countries in implementing the set of inland transport connectivity indicators, it will also feature the results of the benchmarking exercises (both at national and regional levels). The web page will be hosted and maintained by ECE with inputs received from other Regional Commissions.</p>	<p><input type="checkbox"/> Cancelled</p> <p><input type="checkbox"/> Delayed</p> <p>---</p> <p><input type="checkbox"/> Not yet started</p> <p><input type="checkbox"/> In progress</p> <p><input checked="" type="checkbox"/> Completed</p>	<p><i>A SITCIN web-page has, since September 2019, been available on the UNECE website and is regularly updated.</i></p>

VIII. Way ahead –short- and long-term perspectives

18. The project is expected to be completed by the end of 2021. Its concluding phase, the holding of an inter-regional workshop aimed at sharing “lessons learnt” and experiences of the five pilot countries with other interested Governments across the globe to further promote interest in and possible use of the SITCIN, is scheduled to be held in Q4 of 2021, either as a stand-alone event or in conjunction with an official inter-governmental meeting (e.g., a Working Party or Group of Experts meeting).

19. In order to prepare the ground for further use of the SITCIN beyond the scope of the project and outside the initial five pilot countries, the SITCIN project manager has provided, upon request, briefings to a wide array of Working Parties under ITC auspices, including to the 2020 sessions of the Working Parties on Road Transport (SC.1), Rail transport (SC.2), Inland Water Transport (SC.3/WP.3), Transport Trends and Economics (WP.5) and Intermodal Transport and Logistics (WP.24).

20. In particular, WP.5 (which serves as the parent body of the SITCIN project) at its thirty-third session in September 2020 welcomed the information provided by the secretariat on the progress made in implementation of SITCIN project and requested the secretariat to table an official document on the SITCIN project at its next session. Such a document will provide information in particular on the purpose, tasks, scope, legal basis and mechanism of implementation of the SITCIN.

21. In the meantime, regular updates on progress made in the framework of the project will be published on the SITCIN web-page: www.unece.org/trans/main/wp5/special_project_development_of_sustainable_inland_transport_connectivity_indicators.html.
