



Reference Document
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Initial Review of the CAREC DEfR Methodology

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Initial Review of the CAREC DEfR Methodology

I. Introduction

1. The Development Effectiveness Review (DEfR) is a monitoring instrument that brings together annually the components of the CAREC Program for assessing performance. The first DEfR was launched in 2010, drawing on the CAREC Results Framework endorsed at the 8th Ministerial Conference, and based upon the Comprehensive Action Plan (CAP) and existing sector strategies and implementation action plans. The latest, 2012 DEfR marks the fourth edition of this monitoring exercise.

2. The CAREC Program has recognized the need for the DEfR to be pragmatic to remain useful. Since its inception the DEfR has undergone minor adjustments responding to evolving priorities and direction of the CAREC Program, and building on lessons arising from its regular use as a monitoring tool. The adoption of several new or revised strategies and action plans since 2011 suggests this is a good opportunity for a more substantive and systematic review of the DEfR methodology to align it better with the new developments in the CAREC Program. The new strategic initiatives are both at the program level (CAREC 2020) and at the sector level (Transport and Trade Facilitation, Trade Policy, Energy).

3. A Concept Note on the proposed review of the DEfR methodology was presented to the CAREC National Focal Points at the Consultation Meeting on 27–28 September 2013 held in Bangkok, Thailand. Two options were provided for consideration: (a) a Minor Review that would take the existing DEfR and seek to streamline it by essentially picking out the most relevant outcomes and indicators while dropping those whose logical/causal chains are too distant. It would also leave untouched the weights used for aggregating indicators across and within sectors; and (b) an Expanded Review of the DEfR methodology that would cover the analysis proposed under the Minor Review, but also undertake an analysis of whether alternative outcomes and associated indicators may provide a better monitoring tool, along with a review of the weighting schema used to aggregate indicators within and across sectors. The Expanded Review would also recognize the need for adequate consultations with member countries to ensure ownership of resulting revisions. The recommendation of the NFP Consultation Meeting was to request an initial review to be undertaken by the CAREC Secretariat and presented at the Senior Officials Meeting (SOM) in Astana in October 2013 as input for further consideration about more substantive review of the DEfR methodology.

II. Issues with the Existing DEfR Methodology

4. The DEfR monitors the CAREC Program at three levels, namely, development outcomes (Level 1), sector outputs (Level 2), and operational and organizational effectiveness (Level 3). There is a need to further tighten the logical links and causal relationships from Inputs (resources) and Activities (actions) to Outputs (products or services produced), to Outcomes (intermediate benefits from Outputs), to Impacts (long term changes). This will improve identification of indicators that would measure performance more meaningfully. Another benefit of the tightening would be to make the DEfR more streamlined and succinct, rendering it friendlier to users.

Level 1 Indicators

5. Several current Level 1 outcomes are logically and conceptually too distant from the CAREC Program inputs. It is difficult to identify or justify the causal links, and more importantly attribution, of CAREC Program inputs to the various macroeconomic Level 1 outcome indicators. Some Level 1 indicators, such as economic growth and poverty reduction, are more accurately restated as the CAREC Program's long-term vision, since

gestation is long and many factors other than CAREC outputs or outcomes come into play, making attribution difficult. For other Level 1 indicators like labor force participation rate and women employed in non-agriculture sector, it is difficult to see any link at all with the CAREC program. While macroeconomic overview of the CAREC economies and associated macro-level data can be useful in providing the broader context of the CAREC Program's operating environment, it should not be included in the performance rating.

6. Table 1 below provides the current Level 1 indicators with suggestions on how they may be treated to strengthen the CAREC DEfR.

Table 1: Current DEfR Level 1 Indicators and Suggested Actions

	Level 1 Indicator	Suggested Action
1	Population living on less than \$2 a day	Remove; Use for Providing Context
2	Human development index	Remove; Use for Providing Context
3	Gender inequality index	Remove
4	GDP, GDP per capita	Remove; Use for Providing Context
5	Real GDP growth rate	Remove; Use for Providing Context
6	Labor force participation rate	Remove
7	Women employed in non-agricultural sector	Remove
8	Real growth in trade of goods and services	Remove; Discontinued series
9	Trade openness	Retain
10	Intraregional energy trade	Retain
11	GDP per unit of energy use	Remove
12	Foreign direct investment (% of GDP)	Retain
13	Time required to start a business	Remove; Use for Providing Context
14	Cost of business start up	Remove; Use for Providing Context
15	Intraregional trade in total CAREC trade	Retain
16	Logistics Performance Index	Retain? Consider appropriate level

Source: 2012 DEfR and ADB

7. Ten of the 16 indicators in Table 1 are suggested for removal due to lack of direct link to the CAREC program as either outputs or outcomes (and 1 due to lack of data). Of these, a few such as GDP per capita and growth rate, along with poverty and human development indicators may be used to provide a context for the DEfR as background information on the member countries. Two indicators – “cost of business start up” and “time required to start a business” – are useful in their own way, but it is not obvious which part of the CAREC program at sector level is providing any inputs into these (outcome) indicators. One indicator – the Logistics Performance Index – is directly linked to the CAREC Program activities but may be more appropriately considered a sector output at Level 2, for trade facilitation, rather than a program outcome at Level 1.

8. This leaves four of the original indicators available at Level 1, namely, Trade Openness, Intraregional Energy Trade, Intraregional Trade in Total CAREC Trade and Foreign Direct Investment. Trade openness and intraregional trade (energy and total) are direct objectives of CAREC interventions. Foreign Direct Investment could be justified as a program outcome (or an impact) to the extent the sector-level CAREC interventions lead to making these economies more attractive to direct investment from other countries. While 16 indicators for highest level of monitoring, i.e, at the outcome level is perhaps more than is necessary, this initial review does not address the questions of whether or not 4 indicators are adequate and if the 4 left are the best to monitor the effectiveness of the CAREC Program at the highest level.

9. It may be noted in this context that the guiding principle of the CAREC Program is development through cooperation, and that Trade Expansion and Improving

Competitiveness are two strategic objectives of CAREC 2020. High-level Program outcomes may need to capture the ease with which goods, people, and other resources are able to move within and across borders, and in turn the economic activity resulting from such mobility. Integration and economic interconnectedness are thus likely more relevant as Program outcomes. In addition to physical connectivity, the extent to which the Program is having a regional impact in terms of institutional links (e.g. mutual recognition of standards or skills) and policy coordination among the member countries may also be relevant but is not captured by the four current Level 1 indicators remaining above.

Level 2 Indicators

10. Level 2 indicators are sector outputs in case of transport and energy; for trade facilitation and trade policy, the Level 2 indicators are described somewhat ambiguously as “broader intermediate outcome indicators”. The indicators at Level 2 seek to track tangible results delivered through CAREC-related projects and activities in the four priority sectors of transport, trade facilitation, trade policy, and energy. The Level 2 indicators are both quantitative and qualitative (for trade policy), and are shown in Table 2 below. The first two indicators are for transport sector, while the next 4 are for trade facilitation; the remaining two sectors have two indicators each.

Table 2: Current DEfR Level 2 Indicators and Suggested Actions

	Level 2 indicator	Suggested Action
	<i>Transport and Trade Facilitation Sector</i>	
1	Expressways or national highways built or improved	Retain
2	Proportion of total CAREC road corridor built or improved	Retain
3	Time taken to clear a border crossing	Retain
4	Costs incurred at a border crossing clearance	Refine and Retain
5	Speed to travel 500km on CAREC corridor section	Refine and Retain
6	Costs incurred to travel corridor section	Refine and Retain
	<i>Trade Policy Sector</i>	
7	CAREC Trade Liberalization Index	Under Review
8	Institutional Quality Index	No estimate yet/Under Review
	<i>Energy Sector</i>	
9	Transmission lines installed or upgraded	Retain
10	Increased energy generation capacity	Retain

Source: 2012 DEfR and ADB

11. Level 2 outputs may be considered in terms of both the logical chain by which the CAREC Program interventions have a direct effect into the indicators as well as the extent to which the CAREC Program is actually undertaking activities linked to the envisaged logical chain. The indicators in Table 2 are generally directly relevant to the CAREC Program interventions at sector level and thus are suggested to be retained but with possible refinement for those derived from the CPMM. For example, the costs incurred in border crossing and in traveling corridor section are measured in nominal terms with no adjustment for inflation. The time to travel 500 km can also be assessed regarding how specific sections are selected in terms of being representative. Any refinement in the extent to which the CPMM samples are representative of the population parameters would strengthen their utility, reduce spurious changes in the indicators and enable richer interpretation of changes.

12. Level 2 indicators for Trade Policy are listed as under review due to the ongoing formulation of the Trade Policy and Strategic Action Plan (TPSAP) for 2013–2017. No

estimate of the Institutional Quality Index has been presented yet and it is possible both indexes may be reviewed once the TPSAP is finalized. The review may also be needed with the expanded scope of the TPSAP that includes new areas related to Sanitary and Phytosanitary Standards (SPS) and technical barriers to trade as well as trade in services.

13. The indicators for energy sector reflect the results only from completed energy sector projects. Due to the nature and size of these projects, it is generally not possible to reflect incremental annual progress for projects still under construction. The absence of targets for the indicators results in a positive assessment every year. In 2012, the ESCC reassessed the above indicators and agreed to expand the monitoring scope with the addition of three indicators to better record full activities of the energy sector: (i) rehabilitated generation capacity (MW); (ii) new substations installed (megavolt-ampere [MVA]); and (iii) substations upgraded (MV). The baseline for these indicators will be 2013 and they are envisaged for inclusion in the 2014 DEfR.

14. While the Level 2 indicators currently used are generally directly relevant and worth retaining with possible refinements, it may be argued that the set currently used is incomplete and that more indicators may be useful to monitor effectiveness of the CAREC Program. The refined Transport and Trade Facilitation Strategy and Implementation Action Plan, for example, has identified increased focus on railways, as well as on logistics, road safety and road maintenance, for which no indicators are currently included at level 2. The CPMM measures for trade and transport facilitation are based on the Time Cost Distance approach, but the time and costs at borders can also be measured by Time Release Studies (TRS). Although TRS are not typically undertaken every year, current activities of the trade facilitation sector include plans for TRS in the short term and it is not uncommon to find countries undertaking TRS every 2–3 years. Other indicators such as containerization of cross-border trade and competitiveness of the CAREC corridors relative to other corridors may also be useful either on annual basis or at lower frequency.

Level 3 Indicators

15. Indicators at Level 3 are designed to assess operational and organizational effectiveness of the Program by tracking financial and knowledge-based contributions. Monitoring these inputs is meant to help CAREC better understand how the overall program is (i) building on and consolidating its active operations portfolio and completing on-going project activities, (ii) securing new financing, and (iii) responding to its member country needs in capacity building and in knowledge production and sharing. Currently there are eight Level 3 indicators as shown in Table 3 below though two of them (“CAREC technical assistance project financing gap” and “knowledge production and dissemination”) have not been reported on yet, in part due to difficulty in appropriately quantifying them. Both are therefore suggested to be removed as monitoring indicators but further analysis is recommended to develop monitoring indicators for knowledge dimensions of the CAREC Program consistent with the Strategic Knowledge Framework of the CAREC Institute.

Table 3: Current DEfR Level 3 Indicators and Suggested Actions

	Level 3 Indicator	Suggested Action
1	Volume of approved investment projects, cumulative	Recompute (annual figure?)
2	Number of approved investment projects, cumulative	Recompute (annual figure?)
3	Number of completed investment projects, cumulative	Remove
4	Annual average volume of new approved investment projects, 3-year moving average	Retain with review
5	CAREC technical assistance project financing gap	Remove
6	Ratings of CAREC-related technical assistance projects completed	Retain
7	Knowledge production and dissemination	Remove (identify alternate)
8	Participants in CAREC-supported training programs	Retain (introduce gender)

Source: 2012 DEfR and ADB

16. The first three indicators monitor number and volume of investment projects approved and number of completed investment projects; these are all done on a cumulative basis with the result that changes in their levels will always be non-negative. A possible action for the first two indicators is to use an annual horizon, but further assessment may be needed to ensure changes in these indicators can be interpreted meaningfully since there may be many positive or negative reasons for movements (e.g. fewer, larger projects may be better in some contexts/sectors than several smaller projects). “Number of completed projects” may not be more useful on an annual basis than on cumulative basis – it is not clear what this indicator tells by itself unless the issue here is number of projects completed on time. As presently defined the indicator appears to have limited utility and is suggested for removal. Resource mobilization is an important dimension of the CAREC Program and is monitored through a 3-year moving average of volume of approved investments per year. However, monitoring of the CAREC portfolio database requires greater refinement with an objective of reporting on the Operations Growth so that cumulative investment figures are complemented with meaningful analyses of trends. While the moving average dampens the yearly volatility, it also reduces early signals of trend changes, so the recommendation is to retain the indicator but to also revisit the period used for averaging. Finally, it is suggested in Table 3 to introduce gender-disaggregated statistics for participants in training and capacity-building programs while continuing to use cumulative participants as indicator statistic.

III. Aligning DEfR monitoring with evolving strategies

17. While these changes will streamline the DEfR to a considerable extent, they would not adequately address the rationale for better aligning the CAREC results monitoring to the strategic changes at the program and sector levels. Table 4 sheds further light on the alignment gap between the existing DEfR and the strategic developments. The table draws on the CAREC 2020, the refined Transport and Trade Facilitation Strategy and Implementation Action Plan which follows the mid-term review and stock take of the Transport and the Trade Facilitation sectors, and the updated Trade Policy Strategic Action Plan (TPSAP). For both the transport and trade facilitation and the trade policy documents, Table 4 uses draft versions as of the NFP meeting in September 2013.

Table 4: Monitoring Aspects of CAREC Strategies

Sector	Impact	Outcomes	Outputs
CAREC 2020	Strategic objectives: (i) trade expansion; (ii) improved competitiveness		
Transport and Trade Facilitation (based on TTFS 2020)	Expanded trade and improved competitiveness	Competitive corridors established across CAREC	Multimodal corridor network developed
		Efficient movement of goods and people facilitated through CAREC corridors and across borders	Trade and border crossing services improved
		Sustainable, safe, and user-friendly transport and trade networks developed	Operational and institutional effectiveness enhanced
Trade Policy (based on TPSAP draft of 22 September 2013)	[Trade openness for development]	WTO accession achieved for all; WTO commitments implemented by members	Negotiations and changes to achieve membership undertaken; WTO commitments implemented
		Trade-tax regime simplified and liberalized	VAT and excise taxes uniformly applied; miscellaneous taxes on imports eliminated; average tariff reduced to 10% or less and maximum capped at 20%
		Quantitative restraints that are not WTO-compliant are abolished	Export and import quotas and licenses that are not WTO-compliant are abolished
		Technical regulations on industrial goods and SPS measures that are non-tariff barriers are reduced or eliminated	International standards on SPS measures and technical regulations on industrial goods adopted; Certification of accredited conformity bodies in trade partners accepted; Regulations improved
		Trade in services expanded	Cross-border trade in services, temporary movement of labor within CAREC, backbone service provision expanded; improve and review services regulations
		Capacity built and knowledge transferred	Capacity to address WTO accession and trade policy issues; modernize SPS measures; joint control of trans-boundary animal diseases in PRC and MON; aligning of customs policies under Revised Kyoto Convention; services development
Energy Sector ¹		Energy networks of CAREC countries are integrated and energy exchanges take place	New generation and transmission facilities added to and existing assets rehabilitated

Source: ADB

18. Not all the strategy documents use the terminology used in Table 4, in terms of impacts, outcomes and outputs, which has been adopted for purposes of the present review, namely, results monitoring. CAREC 2020 for example, identifies twin “strategic objectives” of trade expansion and competitiveness, while the draft TPSAP has not

¹ Based on Project Lists, Results and Indicators at ESCC Meetings.

explicitly formulated a results framework, and for the energy sector the table draws upon proceedings of ESCC. Nonetheless the table suffices for this initial methodology review in highlighting two things: (i) many of the emerging proposed areas for CAREC interventions at sector level are not reflected in the existing monitoring through the DEfR (railways, logistics, trade in services etc); and, (ii) there is mismatch between three levels of indicators used in the DEfR and a monitoring logic that is structured in terms of inputs, outputs, outcomes and impacts. This results in considerable ambiguity between some sector indicators in terms of whether they should be outputs or outcomes. Another result is the possible absence of relevant outcomes at sector and at program level.

19. The CAREC 2020 also recognized the mismatch and noted, in the context of results monitoring, that “In light of the introduction of the two strategic objectives in CAREC 2020, *the introduction of intermediate outcome indicators between the current Level 1 and Level 2 of the results framework will be explored*”(p. 20, italics added) subsequently.

20. This mismatch is further highlighted in Table 5 below that summarizes the elements of Table 4 – the results-monitoring aspects of CAREC sector and program strategies – using a different format based on the standard theory of change to look at the CAREC Program at five levels. Taken together, the five levels in the theory of change show how the main elements of the CAREC 2020 and associated sector interventions are connected with sector results (outputs and outcomes), and ultimately to improvements in regional level outcomes and impacts.

- **Level 1 – CAREC Bodies and Institutions:** This level lists the various CAREC bodies and institutions that are active in the various sectors. The theory of change starts at this level and sets out the structure that supports the implementation of the CAREC 2020 strategic framework.
- **Level 2 – CAREC Interventions:** The second level is intended to capture the interventions undertaken to implement the framework. The interventions include (i) strategies/studies/analytic work; (ii) policy changes; (iii) projects; and (iv) institutional changes. The interventions listed in Table 5 are more generic in nature; they are not an exhaustive list of all planned interventions but more of an articulation of the intended foci of any number of interventions. However, specific “flagship” projects or interventions may be listed here. Indicators at this level would include measurement of the CAREC portfolio.
- **Level 3 – Changes in Sector Outputs:** This third level captures the changes at the sector level in terms of the systems and infrastructure that will be improved, expanded, enhanced, etc over time. Sector outputs are desired changes in systems and infrastructure brought about by the CAREC interventions. These occur within the sectors of the different CAREC countries. An example would be road and rail infrastructure and systems. Indicators at this level would measure the amount of infrastructure or the nature of the systems, for example the length of roads connecting countries.
- **Level 4 – Changes in Sector Outcomes:** The fourth level articulates the changes that are desired in terms of sector outcomes. Sector outcomes are defined as the use of sector outputs by beneficiaries or clients. For example, this would include the use of road and rail infrastructure to transport people and goods across borders. Indicators at this level would measure the amount of cross-border freight for example.
- **Level 5 – Regional Impacts:** This is the final level and includes the “end / final” impacts that are desired at the regional level, above the country level. Indicators at this level would likely be by country level but rolled-up to a regional level.

Table 5: Refining Alignment of CAREC Strategies and Results Monitoring

Regional Impacts	[Expanded trade and improved competitiveness]				
↑ Sector Outcomes	Competitive Corridors Established Efficient movement of goods and people along corridors and across borders Sustainable, safe, user friendly networks			Energy networks of CAREC countries are integrated and energy exchanges take place	
↑ Sector Outputs	Multimodal corridor network developed Improved Operational and Institutional Effectiveness	Improved Trade and Border Crossing Networks	WTO accession achieved for all WTO commitments implemented Trade-tax regime simplified and liberalized Non-tariff barriers (TBT, SPS) reduced or eliminated Trade in services expanded		
↑ CAREC Interventions	Road projects; Railways – new; renovation; electrification of existing Logistics centers Integrate road safety and maintenance into each project	Custom modernization /NSW Coordinated Border Management SPS Cooperation	VAT and excise taxes uniformly applied; miscellaneous taxes on imports eliminated; average tariff reduced Quantitative restraints abolished International standards on SPS measures and technical regulations on industrial goods adopted; Certification of accredited conformity bodies in trade partners accepted; Regulations improved Temporary movement of labor within CAREC, provision expanded; improve services regulations Capacity building and knowledge on WTO accession, trade policy, SPS		New generation and transmission facilities added to and existing assets rehabilitated
CAREC Bodies	TSCC	CCC	TPCC	ESCC	CI

CAREC = Central Asia Regional Economic Cooperation Program, CCC = Customs Cooperation Committee, CI = CAREC Institute, ESCC = Energy Sector Coordinating Committee, NSW = national single window, SPS = sanitary and phytosanitary, TBT = technical barriers to trade, TPCC = Trade Policy Coordinating Committee, TSCC = Transport Sector Coordinating Committee, VAT = value-added tax, WTO = World Trade Organization.

21. The refined Transport and Trade Facilitation Strategy and Implementation Action Plan has the most details in Table 5 due to its advanced stage of formulation, and shows clearly the various levels for monitoring. Comparing this with the existing DEfR methodology shows that monitoring of outcome indicators for the sector would need to be strengthened. The Table also shows that for some of the other sectors, outcomes could be formulated more clearly, as distinct from outputs, and relevant indicators also identified. Comparison of Table 5 with the DEfR methodology also indicates that the Level 3 indicators correspond above to CAREC interventions, while Level 2 and Level 1 indicators span across 3 categories – outputs, outcomes and regional impact –without any consistency in patterns across the sectors. The bottom layer in Table 5, for CAREC bodies, also includes CAREC Institute though no entries are made for any of the higher levels, which remains a task to be undertaken in a broader review.

IV. Conclusions

22. This minor review of the DEfR methodology was recommended by the NFP Consultation Meeting in September 2013, and its findings above, if endorsed by the SOM, would result in substantial revisions in the CAREC DEfR. The largest change will be in the Level 1 indicators, of which only four of the original 16 are suggested for being retained. All Level 2 indicators are recommended for being retained though two, for the trade policy sector, are under review pending finalization of the sector strategy, and some indicators related to trade facilitation are recommended for further refinement. The initial review also suggests that additional indicators may be needed at Level 2 to better align with the new areas of emphasis emerging from the mid-term review of the transport and trade facilitation sectors and the updating of strategy in trade policy. Level 3 indicators are broadly relevant conceptually and the challenge is primarily in implementing through appropriate

methodology for quantifying. Three of the 8 indicators are suggested for review in terms of how they are computed, and three are suggested for removing in part due to lack of appropriate quantification.

23. While the findings of this minor review would streamline the DEfR methodology, they would not address the more substantive issues of aligning the emerging strategic revisions at the sector level, and of mismatch between the 3-level DEfR and a comprehensive chain of inputs, outputs, outcomes and impacts. The previous section provided a simple structure to guide further work in this direction during a more expanded review.

24. The minor review has also helped clarify the scope of additional work for a comprehensive review if it is undertaken. Specifically, it appears the expanded review may involve less than originally envisaged, in part because some of the required analysis has already been undertaken through this initial review. However an expanded review would still need to have its findings reviewed and owned at the level of coordinating committees of sectors, thus affecting potential timeline, which consequently remains effectively unchanged from that presented at the NFP Consultation Meeting in September 2013. The table below provides the expected timeline for an expanded methodology review.

Table 6: Timeline for Expanded Review of DEfR Methodology

TASK	COMPLETION
A. Consultations and approval of refined Results Framework (RRF)	
1. Present Note and proposed RRF for discussion with NFPs	September 2013
2. Revise RRF, incorporating comments and suggestions of NFPs, and specifying data sources and collection method	October 2013–January 2014
3. Circulate revised RRF among Sector committees and MIs	January 2014
4. Revise RRF, incorporating comments and suggestions of Sector committees and MIs	February 2014
5. Circulate revised RRF among NFPs, Sector committees and MIs	March 2014–May 2014
6. Finalize revised RRF, incorporating comments and suggestions from NFPs, Sector committees and MIs	June 2014
7. Present revised RRF to SOM	June 2014
B. Establish data collection mechanism with NFPs; complete data requirements for refined outcome and output indicators	
	January 2014
C. Collect data for unchanged indicators	
	January–May 2014
D. Analysis and write up of DEfR (assuming June 2014 approval)	
	June–July 2014

DEfR = Development Effectiveness Review, MI = Multilateral Institution, NFP = National Focal Point, RRF = Refined Results Framework, SOM = Senior Officials' Meeting.