September 2013

Guidelines for the Use of ADB's Results Framework Indicators for Core Sector Outputs and Outcomes
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<td>ADB</td>
<td>Asian Development Fund</td>
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<tr>
<td>CO2</td>
<td>carbon dioxide</td>
</tr>
<tr>
<td>DEfR</td>
<td>development effectiveness review</td>
</tr>
<tr>
<td>DMF</td>
<td>design and monitoring framework</td>
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<tr>
<td>GHG</td>
<td>greenhouse gas</td>
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<tr>
<td>km</td>
<td>kilometer</td>
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<tr>
<td>MFF</td>
<td>multi-tranche financing facility</td>
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<tr>
<td>MVA</td>
<td>megavolt-ampere</td>
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<tr>
<td>MW</td>
<td>megawatt</td>
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<tr>
<td>OCR</td>
<td>ordinary capital resources</td>
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<tr>
<td>PCR</td>
<td>project completion report</td>
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<td>RFI</td>
<td>results framework indicator</td>
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<td>SDP</td>
<td>sector development program</td>
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<td>RRP</td>
<td>report and recommendation of the President</td>
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<td>SME</td>
<td>small and medium-sized enterprises</td>
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<td>SPRU</td>
<td>Strategy and Policy Department (Results Management Unit) in the Asian Development Bank</td>
</tr>
<tr>
<td>tbd</td>
<td>to be determined</td>
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<tr>
<td>XARR</td>
<td>extended annual review report</td>
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I. INTRODUCTION

1. These guidelines discuss the use of the core sector indicators adopted for level 2 of the corporate results framework of the Asian Development Bank (ADB).¹ They are applicable to all projects that deliver outputs and outcomes that ADB has targeted in its corporate results framework. Whenever such outputs and outcomes are programmed in a new project, the targeted level of achievement needs to be reported in a short document linked to the report and recommendation of the President to the Board of Directors (RRP). Whenever corporate results framework outputs and outcomes have been delivered in a completed project the target and actual levels of achievement need to be reported, in the Project Completion Report (PCR) for public sector operations and the Extended Annual Review Report (XARR) for private sector operations. These guidelines may be updated from time to time.

2. These guidelines are intended for all staff in operations departments dealing with project processing and administration, and portfolio performance and project completion reports. They should be used:

   (i) when preparing a new project (loan and/or Asian Development Fund [ADF] grant), and
   (ii) when preparing a PCR or XARR.

3. ADB reports progress in implementing aspects of its Strategy 2020 through the annually published Development Effectiveness Review reports (DEfR). By using the Strategy 2020 results framework, the DEfR tracks key outputs and outcomes "delivered" and "programmed." It does this by aggregating data across ADB’s projects using a set of standard indicators. This is done to show how ADB’s focus on core sector operations and its expanding resources are indeed reflected in numbers of key outputs and outcomes. The tracking also shows whether programmed outputs and outcomes are indeed materializing.

II. RESULTS FRAMEWORK INDICATORS

4. ADB Results Framework Indicators (RFIs) are the set of standard indicators used to aggregate data across projects. The indicators are found in level 2 of ADB’s corporate results framework. By using these RFIs ADB is able to aggregate data on core sector outputs and outcomes of ADB-supported interventions over time and at different levels—country, sector, ADF, and ADB-wide—and assess performance at levels above individual projects. RFIs measure core sector outputs and outcomes and are worded in an inclusive and composite way to facilitate aggregation of data. The definitions of the RFIs and the units of measurement associated with them are fixed for the 2013-2016 period.

¹ ADB. 2013. Review of the ADB Results Framework. Manila. The results framework includes a set of agreed indicators with baseline values and targets at four levels: (i) Development progress in Asia and the Pacific, (ii) ADB contributions to development results, (iii) ADB operational management, and (iv) ADB organizational management.
A. General Questions about ADB-Results Framework Indicators

1. What is the relationship between RFIs and project Design and Monitoring Framework (DMF) output and outcome indicators?

5. Design and Monitoring Framework (DMF) output and outcome indicators relate to RFIs through linked Country and Sector results framework. There are 3 frameworks extending down from the ADB corporate results framework: the CPS and Sector results frameworks, and the project DMF. (Figure 1) Projects are aligned with, and expected to contribute to, the sector outcomes and outputs contained in the sector results frameworks. Project DMFs will contain a number of results statements (and indicators), but at least one must be a sector output and its indicators.

![Figure 1: Linked Frameworks: Corporate, CPS, Sector, and DMF](source: ADB, Strategy and Policy Department)

6. DMF indicators are project-specific and include indicators identified jointly by ADB and government project teams. They are selected given the particular requirements of the project and intended to help executing agencies and ADB project officers measure the project's progress and performance. Their units of measurement are geared to suit country systems, specific situations and technical specifications. RFIs are a standard set of indicators designed to cover a wide range of ADB's core sector outputs and outcomes.

7. The standard set of RFIs and project specific DMF indicators are usually related in one of 4 different ways (If the project is not delivering outputs and outcomes captured in the RFIs, then no RFIs should be included in the DMF).

   (i) The two indicators are the same - The DMF project specific indicator is the same as the RFI and there is no wording change. Example: “Greenhouse gas emission reduction (tons of CO\textsubscript{2} reduced)”. 


(ii) The DMF uses a slightly modified version of the RFI as appropriate for the project context. Example: The RFI is “Railways constructed or upgraded (kilometers)”. A DMF output indicator could be “100 km of railways constructed from location X to location Y”.

(iii) The DMF has several indicators that can be aggregated to supply data for a single RFI. Example: The project may have certain road construction output targets in various districts, and wish to monitor progress of their implementation in detail. In that case, the DMF may include various district road construction output targets specific to each district. “15 km constructed in District A”; “22 km of road rehabilitated in District B”; and, “8 km of road constructed in District C”. In this case the DMF does not need to have the single RFI “Roads built or upgraded (km)”.

(iv) The DMF has an indicator whose data is modified to supply data for a RFI. The DMF indicator may be worded in a specific way to meet project requirements. Although the wording is different than that the RFI the data matches with the RFI and can still be aggregated. Example: DMF indicator is “Domestic water for 900,000 project beneficiaries during dry season increased by 10% (baseline: 2 liters/person/day) This measures the same data as the RFI “Households with new or improved water supply (number)” To be aggregated the 900,000 beneficiaries needs to be divided by the average number of people per household in the project area to determine the number of households with an improved supply of water.

2. In which sectors can projects employ RFIs?

8. The outputs and outcomes measured in RFIs are typically expected from projects in ADB’s core sectors: (i) education, (ii) energy, (iii) finance, (iv) transport and communication, and (v) water supply and other municipal infrastructure and services. However, they can be expected in projects in other sectors—including agriculture and natural resources, and multisector. For example, agriculture projects may have a component for constructing a rural road. Projects classified as multisector are likely to deliver outputs and outcomes in various core sectors—such as water, energy, and microfinance. It is less likely that RFIs are applicable to projects in the health and social protection, public sector management, and industry and trade sectors (although projects in the trade and industry sector sometimes produce microfinance outputs). Even in the core sectors, not all projects produce RFI outputs, as for instance, airport or seaport projects.

3. How should RFIs be reflected in project documents?

9. If the project is delivering outputs and outcomes captured in the RFIs, the specific RFI should be listed in Linked Document #10 of the RRP template along with target values. RFIs should be included in DMFs where appropriate as per 4 scenarios described in para. 7.

10. The first step is to enter indicators and targets in the document linked to the RRP (Linked Document #10 – "Contribution to the ADB Results Framework") The RRP linked document needs to include all appropriate RFIs, including a quantified estimate targeted to be achieved at the end of the project. The second step is to relate the DMF indicators to applicable RFIs using one of the four scenarios listed above. Finally, after project completion the PCR or XARR needs to append a table which provides the quantified actual achievement of the project in terms of the RFI.
4. Do RFIs apply to the entire project?

11. **Yes. The key outputs and outcomes of the entire project are counted.** Projects include those operations that are financed in total or in part by loans, ADF grants, or equity investments. They include sovereign and nonsovereign loans. Most ADB-supported projects are financed from multiple sources; all outputs and beneficiaries are to be counted towards RFIs, irrespective of the size of ADB's contribution.

12. For “blend” projects financed from both ADF and ordinary capital resources (OCR) RFIs have to be counted separately for the ADF or the OCR financing products. Blend projects will have a marker that will help separate outputs financed by OCR and outputs financed by the ADF. If the RFIs are supported by both then the target must be split between the two according to the proportion of financing. There should be no double counting or undercounting during this process. While the financing product is a main criterion for registration of outputs, the outputs supported by other financiers need to be assigned as well to one or more financing products.

5. Are RFIs counted by financial product or project?

13. **RFIs are counted by projects not by financial products.** A project can be supported by more than one financial product, for example, an ADF loan and an OCR loan, as seen in blend projects. For a multicountry regional cooperation project, the constituent country subprojects will be the units of account. As the outputs, outcomes, and impacts will vary by country, the project will have a separate record for each country.

How should RFIs be reported in E-Ops?

14. **E-Ops data entry screens will allow the registration of all RFIs for key outputs and outcomes for the project** (in a country) under two tabs (called RFI) – one under Content, and one under the PCR. There will be no special requirement to assign outputs to different financing modalities, or to divide their numbers in proportion to their cost.

6. Can all intervention modalities employ RFIs?

a. **Policy-based operations**

15. **Generally not,** unless they are earmarked to produce a particular quantity of identifiable outputs and outcomes. Policy-based operations do not usually deliver identifiable key outputs that are reasonably attributable to the program itself. These operations may deliver outputs—for example, specific policy and regulatory reforms—that are unique to the operation, which cannot be measured through RFIs.

16. When policy-based operations are earmarked to help deliver specific RFIs, then the method of calculation must be elaborated in the linked document ‘Contribution to the ADB Results Framework,’ in the column on methods and comments. All relevant assumptions must be elaborated for outputs and outcomes in all relevant core sectors.

b. **Sector Development Programs**

17. **Yes, but normally only for the investment project component under the sector development program (SDP).** As per para. 16 policy-based components generally will not being producing outputs and outcomes that could be counted through RFIs.
c. Sector projects

18. Yes, but targets should not be set until the design of all subprojects has been completed. First RFIs should be selected based on subproject design and recorded in Linked Document #10 with the quantity of the target entered as 'tbd' (to be determined), since the total number of outputs or outcomes expected is not known at this stage. Next, during implementation, the RFI target for the entire project needs to be calculated and recorded upon completion of the design of all subprojects. The target value needs to be captured in the E-Ops module through a change request. The actual quantities delivered need to be reported after project completion, in the PCR or XARR.

d. Multi-Tranche Financing Facilities

19. Yes, but target quantities need to be estimated only for each tranche approved (or periodic financing request). Each periodic financing request needs to list its contribution to the RFIs. The RRP of a multi-tranche financing facility (MFF) needs to show the RFI for anticipated key outputs and outcomes but does not need to register the quantities targeted – the target can be reflected as 'tbd'.

e. Equity investments

20. Generally yes, although an estimate of the number of outputs and outcomes equivalent to the investment will often have to be made.

f. Results Based Lending

21. Yes, results based lending is designed around specific outputs and outcomes. If these results match with the RFIs then they should be included.

6. Should co-financed outputs be registered through RFIs?

22. A conditional yes. Outputs and outcomes of components of projects financed by other financiers, including government, will be included in the aggregates, if the components are administered by ADB, or the component's financing is reflected under the financing plan in the RRP. The outputs produced under parallel co-financing are not included in the DMF. When ADB is not administering the project, ADB output and outcome targets will be counted, but not the targets of the other financing sources (these should not be seen as part of the project).

7. Should RFIs register baseline values and time targets?

23. No. The baseline for the outputs is always 0, the baseline year is the year of project approval, and the target year is the year of project completion.

8. What if projects are canceled?

24. Outputs and outcomes of approved projects which were wholly or partially cancelled before their effectiveness or before any expenditure was booked, should be deleted from the E-Ops modules in proportion to the part cancelled. Projects from which parts are cancelled after effectiveness implementation need to keep the originally planned outputs and outcomes in the database.
## III. LIST AND DEFINITIONS OF ADB-RESULTS FRAMEWORK INDICATORS

### A. List of RFIs

25. The list of RFIs, as reflected in Level 2 of ADB’s new Results Framework adopted in 2013, is shown in Table 1. They refer to key outputs and outcomes delivered from ADB supported sovereign and nonsovereign operations in the Strategy 2020 core sectors: education, energy, finance, transport, and water. In addition to the RFI, Table 1 includes a standard set of performance data to reinforce the scorecard assessment. These are referred to as standard explanatory data (SED). The use of SED formalizes the practice of reporting on additional indicators in past DEFRs to strengthen performance assessment.

<table>
<thead>
<tr>
<th>Table 1: ADB Corporate Results Framework Indicators including SEDs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy</strong></td>
</tr>
<tr>
<td>• Greenhouse gas emission reduction (tCO₂-equiv/year)</td>
</tr>
<tr>
<td>• Energy saved (terawatt-hour equivalent per year)* [SED]</td>
</tr>
<tr>
<td>• New households connected to electricity (number)</td>
</tr>
<tr>
<td>• Installed energy generation capacity (megawatts (out of which renewable (megawatts)*</td>
</tr>
<tr>
<td>• Transmission lines installed or upgraded (kilometers)</td>
</tr>
<tr>
<td>• Distribution lines installed or upgraded (kilometers)</td>
</tr>
<tr>
<td><strong>Transport</strong></td>
</tr>
<tr>
<td>• Use of roads built or upgraded (average daily vehicle-kilometers in the first full year of operation)*</td>
</tr>
<tr>
<td>• Use of railways built or upgraded (average daily ton-kilometers in the first full year of operation)*</td>
</tr>
<tr>
<td>• Roads built or upgraded - Expressways and national highways (kilometers) [SED]</td>
</tr>
<tr>
<td>• Roads built or upgraded - Provincial, district, and rural roads (kilometers) [SED]</td>
</tr>
<tr>
<td>• Railways constructed or upgraded (kilometers)</td>
</tr>
<tr>
<td>• Urban rail- and bus-based mass transit systems built or upgraded (kilometers)*</td>
</tr>
<tr>
<td>• Passengers on urban rail- and bus-based mass transit systems built or upgraded (average daily number in the first full year of operation)* [SED]</td>
</tr>
<tr>
<td><strong>Water</strong></td>
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<tr>
<td>• Households with new or improved water supply (number)</td>
</tr>
<tr>
<td>• Households with new or improved sanitation (number)</td>
</tr>
<tr>
<td>• Wastewater treatment capacity added or improved (cubic meters per day)</td>
</tr>
<tr>
<td>• Water supply pipes installed or upgraded (length of network in kilometers)</td>
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<tr>
<td>• Land improved through irrigation, drainage, and/or flood management (hectares)</td>
</tr>
<tr>
<td>• Households with reduced flood risk (number)* [SED]</td>
</tr>
<tr>
<td><strong>Finance</strong></td>
</tr>
<tr>
<td>• Trade finance supported ($ million per year) *</td>
</tr>
<tr>
<td>• Microfinance loan accounts opened or end borrowers reached (number) Male/Female</td>
</tr>
<tr>
<td>• Small and medium-sized enterprise loan accounts opened or end borrowers reached (number)</td>
</tr>
<tr>
<td><strong>Education</strong></td>
</tr>
<tr>
<td>• Students benefiting from new or improved educational facilities (number) Male/Female*</td>
</tr>
<tr>
<td>• Students educated and trained under improved quality assurance systems (number) Male/Female*</td>
</tr>
</tbody>
</table>
- Teachers trained with quality or competency standards (number) Male/Female*

Regional Cooperation and Integration
- Cross-border transmission of electricity (gigawatt-hours per year)*
- Cross-border cargo volume facilitated (tons per year)*

*Indicates new or modified indicator not yet in E-Ops.

B. Specific Definitions and Guidelines for RFIs Including SEDs

26. The detailed guidelines on the definitions and the rules for each indicator are reflected in Appendix 1. In the E-Ops data entry modules they are accessible online, by clicking on the 'Details' icon.
Appendix 1: Specific Definitions and Guidelines for RFI
Including SEDs
Detailed Definitions and Guidelines for Use of RFIs

Core Operational Results

**Energy**

1. **Greenhouse gas emission reduction**  
   *(tCO$_2$-equivalent per year)*

   The avoided carbon dioxide (CO$_2$) equivalent emission as a result of a clean energy project or component of a project.

   Projects with CO$_2$ emission reduction include renewable energy generation, energy efficiency projects in supply and demand side, and use of cleaner fuels such as natural gas in place of coal or oil.

   In the absence of ready information on emission reduction in the PCR or RRP, a proxy emission factor of 793.73 tons of CO$_2$ per GWh is to be used for developing Asia (countries where ADB may implement projects).

   This proxy factor is to be used to calculate emission reduction and/or avoidance accruing from the projects, i.e., GWh generated using renewable energy and GWh saved through efficiency improvement.

   This climate change indicator will monitor the avoided annual CO$_2$ equivalent emission by clean energy project or component. It will include CO$_2$ and other greenhouse gases identified by the United Nations Framework Convention on Climate Change and the greenhouse gas potential established under the Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories (IPCC. 2006. *IPCC Guidelines for National Greenhouse Gas Inventories*. Japan).

   Annual CO$_2$ reduction or avoidance will be calculated as follows:

   **Supply side:**  
   
   
   \[
   \text{tCO}_2 = \text{GWh generated or saved} \times \text{CO}_2 \text{ emission factor} \quad (\text{tCO}_2 / \text{GWh})
   \]

   **Demand side:**  
   
   - **Electricity related:**  
     
     \[
     \text{tCO}_2 = \frac{\text{GWh saved measured at demand-side meter/ (1 – transmission and distribution losses) \times CO}_2 \text{ emission factor}}{\text{GWh}}
     \]

   - **Fossil fuel related switching projects:**  
     
     \[
     \text{tCO}_2 = \text{Fossil fuel saved (TJ) \times CO}_2 \text{ emission factor} \quad (\text{tCO}_2 / \text{TJ})
     \]
2. **New households connected to electricity** (number)  
   Number of new households given electricity connection.

Only new household connections resulting from a project are counted. Households with electricity connection and receiving improved services through a project are not counted. The number of new household connections resulting from a project is counted in total and not proportional to the ADB funding component only.

New connections may be reported as a straightforward number, i.e., the number of households that the project would connect to power. However, the indicator may also be measured in terms of population that would be served by the project. In this case, the population is divided by the average household size in the country or the locality. Thus, it is important that the RRP mentions the average household size.

Sources: PCRs and RRPs.

3. **Installed energy generation capacity** (megawatts)  
   - **Renewable**
   
   Aggregated additional capacity in megawatts (MW) resulting from generation projects using conventional and renewable energy sources.

   **Installed energy capacity from a conventional energy project** is the total incremental generating capacity of a project sourced from conventional sources, e.g., oil, coal, or large hydro. A project may involve construction of a new power plant or acquisition of an asset, e.g., the private sector acquiring a government-owned coal plant. This includes the MW-equivalent (MW-eq) capacity of additional heating supply as well as hydrocarbon-based energy added through production or additional import capacity. Energy export is excluded from level 2 measurement as it does not add to the energy resources of a country.

   Calculation for additional installed capacity created using conventional energy is the aggregate of the following categories:
   
   (i) MW capacity of new power plant projects,
   (ii) incremental MW as the result of rehabilitation projects,
   (iii) MW-eq capacity of heating supply added, and
   (iv) MW-eq of natural gas and/or oil production capacity added.

   Gross capacity addition will be measured. Conversion to MW-eq is based on heating value and standard factor of 3,600 megajoules per hour (MJ/h); or 860
megacalories per hour, 85.98 kilograms of oil equivalent per hour, 122.8 kilograms of coal equivalent per hour. In cases where net dependable capacity and gross installed capacity are reported in the PCR, take the gross amount to mean the actual installed energy capacity. Conversion to MW-eq is calculated as follows:

\[
\text{MW-eq} = \text{fuel quantity (tons/hr) } \times \text{heating value (MJ/ton)} \times \frac{40\%}{3,600 \text{ MJ/hr}}
\]

where the heating value is available in the RRP; otherwise the following may be considered as default: coal: 18,900 MJ/ton, oil: 42,300 MJ/ton, gas: 48,000 MJ/ton. The energy conversion efficiency for hydrocarbon production is 40%.

Installed energy generation capacity from a renewable energy project is the rated capacity of a project or project component involving renewable energy technologies such as solar, wind, small or mini hydro, geothermal, and biomass. The project may be either new construction or acquisition (e.g., the private sector acquiring a government-owned small hydro plant). For further guidelines, see ADB. 2011. Manual for Calculating Energy Output Indicators. Manila.

Sources: PCRs and RRPs.

4. Transmission lines installed or upgraded (kilometers)

Length of power, gas, and oil transmission lines (ground distance in kilometers). For power transmission lines, this should be the simple distance from tower A to tower B and not the circuit-kilometer.

Although the indicator does not differentiate between a newly installed and an upgraded line, upgraded lines should meet certain criteria.

Upgraded power transmission lines should involve an increase in voltage level, e.g., from a low-voltage line to a high-voltage line. For gas and oil transmission lines, there should be an increase in pipe diameter or the pressure of the fluid.

As this is a simple distance between two points, little calculation is needed, except when circuit-kilometer is the unit involved as the type of line has to be considered. If it is a double-circuit line, the number of circuit-kilometers is halved to give the indicator. If it is single-circuit line, the number of circuit-kilometers is the same as the distance between the given points.

A circuit-kilometer is a measure of the distance from tower A to tower B multiplied by the number of circuits. A double-circuit transmission line means that there are two lines or cables running the length. Thus, for a
double-circuit line, 100 circuit-kilometers imply a 50-kilometer transmission line.

Sources: PCRs and RRPs.

5. **Distribution lines installed or upgraded** (kilometers)

Length of the distribution network of lines or pipes installed and/or upgraded in kilometers, aggregating:

(i) power distribution lines installed or upgraded, generally at 110 kilovolts or lower;
(ii) district heating network pipes installed or upgraded; and
(iii) urban gas supply network pipes installed or upgraded.

Distribution lines, whether upgraded or installed, include power distribution lines, district heating network pipelines, and urban gas supply network pipelines.

An upgrade would involve improvement of the network including reconductoring or changing the wires of the distribution line.

Sources: PCRs and RRPs.

**Transport**

6. **Use of roads built or upgraded** (average daily vehicle-kilometers in the first full year of operation)

Traffic benefiting from built or upgraded roads in the year after project completion.

Vehicles are buses, trucks, minivans, cars, motorcycles, and other motorized means of conveyance, depending on the country and location. Daily vehicle-kilometers is to be calculated by adding all distances in kilometers traveled by all types of vehicles in a day on roads built or upgraded.

Average daily vehicle-kilometers is calculated over the year immediately upon project completion, making allowances for factors such as seasonality.

All vehicle-kilometers traveled will be counted, including those of traffic that existed before upgrading, diverted traffic, and traffic generated as a result of road improvement, as well as annual growth in each of these categories. This is because a main objective of most transport projects is to upgrade facilities, resulting in improved service and lower cost of transport for all traffic.

Sources: PCRs and RRPs.

7. **Use of railways built or upgraded** (average daily ton-kilometers in the first railway in the year after project completion.)
full year of operation)

Ton-kilometer is often based on data provided by the railway company, as revenues are typically collected on this basis. If this is not available then daily ton-kilometer is calculated by multiplying the daily freight tons carried by the average number of kilometers hauled.

Average daily ton-kilometers is calculated over the year immediately upon project completion, making allowances for factors such as seasonality.

All ton-kilometers will be counted, including those of traffic that existed before upgrading, diverted traffic, and traffic generated as a result of railway improvement, as well as annual growth in each of these categories. This is because a main objective of most transport projects is to upgrade facilities, resulting in improved service and lower cost of transport for all traffic.

The indicator excludes urban rail.

Sources: PCRs and RRPs.

<table>
<thead>
<tr>
<th>8. Roads built or upgraded (kilometers)</th>
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<tbody>
<tr>
<td>Length of expressways and national highways (i.e., fully access-controlled roadways) and provincial, district, and rural road networks (i.e., roads without full access control) built or upgraded, expressed in kilometers.</td>
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</table>

**Fully access-controlled** implies (i) all cross traffic is fully grade separated (e.g., using overpasses); (ii) the use of a median crash barrier or wide median to physically separate both directions of travel; (iii) full segregation of motorized traffic from nonmotorized traffic, including pedestrians; (iv) prohibition of unsuitable vehicle classes and nonmotorized traffic from roadway use; and (v) use of roadside crash barriers or clear zones.

**Roads without access control** may include kilometers of nonpaved road (tracks), if investments in these have been made through the project.

**Upgrading** includes all activity to restore a degraded road to its originally intended design capacity (repair or rehabilitation) and to improve on its design capacity (e.g., by widening). Upgrading of road signage only is excluded.

This calculation is not affected by bidirectional travel or the number of lanes (i.e., corridor kilometers are used, not lane kilometers).
9. **Railways constructed or upgraded** (kilometers)  
Length of railway tracks built or upgraded in kilometers (double tracks do not count twice).

Railways refer to intercity and/or regional rail infrastructure.

Sources: PCRs and RRPs.

10. **Urban rail- and bus-based mass transit systems built or upgraded** (kilometers)  
Length of urban public transport corridors built or upgraded in kilometers (bidirectional travel does not count twice, i.e., record corridor kilometers are used, not lane kilometers).

Urban mass transit incorporates all collective transport services operating within urban areas or extended to attached suburban areas.

Rail-based mass transit systems may include underground heavy rail (i.e., metro rail), elevated heavy rail, at-grade light rail transit, grade-separated light rail transit, monorail, and rail-based personal rapid transit.

Bus-based urban mass transit includes all modes with the provision of high-quality collective transport services by rubber-tired vehicles. These modes can include bus rapid transit, bus rapid transit lite, rubber-tired people movers, and rubber-tired personal rapid transit.

Upgrading includes all activity to restore a degraded mass transit system to its originally intended design capacity (repair or rehabilitation) and to improve on its design capacity (e.g., by providing passing lanes at stations). Upgrading of corridor signage only is excluded.

Sources: PCRs and RRPs.

**Water**

11. **Households with new or improved water supply** (number)  
All additional households that benefit from projects offering piped or non-piped water supply systems that are of a higher order than the system that the households used before (non-piped supply may include standpipes), and households that are already connected to a piped system but are provided with improved service, e.g., longer hours of service and/or increased pressure.
The situation at the end of the project is to be reflected.

Sources: PCRs and RRPs.

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<tbody>
<tr>
<td>12. <strong>Households with new or improved sanitation</strong> <em>(number)</em></td>
<td>All additional households that benefit from projects offering a variety of sanitation systems to households that either did not benefit from sanitation systems before or benefit from systems of lesser order, and households that are already benefiting from sanitation services but are provided with improved service, e.g., sewer connection, septic tank, pour-flush, simple pit latrine, or ventilated improved pit latrine.</td>
</tr>
<tr>
<td>13. <strong>Wastewater treatment capacity added or improved</strong> <em>(cubic meters per day)</em></td>
<td>Maximum cubic meters of wastewater intake per day at the new or improved treatment plant, excluding waste treatment capacity of septic tanks and the removal of the waste.</td>
</tr>
<tr>
<td>14. <strong>Water supply pipes installed or upgraded</strong> <em>(length of network in kilometers)</em></td>
<td>All sizes of new and repaired or upgraded pipes intended to transport water for urban water use for domestic and nonagricultural business purposes, expressed as their aggregate length in the network, irrespective of pipe diameter, comprising mains as well as reticulation pipes.</td>
</tr>
</tbody>
</table>
| 15. **Land improved through irrigation, drainage, and/or flood management** *(hectares)* | Rural land area improved through any new or improved:  
(i) irrigation,  
(ii) drainage services, and  
(iii) flood management works. |
|   |   |

**Finance**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>16. <strong>Trade finance supported</strong> <em>(value in million USD per year)</em></td>
<td>Value of trade finance instruments or transactions for which a guarantee is issued or loan is disbursed under the Trade Finance Program in a given year.</td>
</tr>
<tr>
<td></td>
<td>The Trade Finance Program is a nonsovereign operations program that fills market gaps in trade finance by providing guarantees and loans through partner banks, in support of trade.</td>
</tr>
</tbody>
</table>
17. **Microfinance loan accounts opened or end borrowers reached** (number)  
   - Female  
   - Male  

The number of end borrowers; or, if not available, the number or estimate of microfinance loan accounts opened (regardless of amount in currency) over the course of the project. All those reached by microfinance lending or saving group activities of the project are counted, including participants in self-help groups. The definition of microfinance follows country conventions.

Sources: PCRs and RRPs.

18. **Small and medium-sized enterprise loan accounts opened or end borrowers reached** (number)  

Preferably number of end borrowers, but if not available, the number of small and medium-sized enterprise (SME) loan accounts opened (regardless of amount) over the course of the project. The calculation does not include equity operations for SMEs.

The definition of SMEs follows the definition generally used in the country of the project.

Sources: PCRs and RRPs.

**Education**

19. **Students benefiting from new or improved educational facilities** (number)  
   - Female  
   - Male  

Total number of students benefiting from new or upgraded physical educational facilities.

Each student is counted only once, regardless of the number of years a student attends the education or training institution, or of the number of improvement inputs the education or training institution receives. All students benefiting from cofinanced projects are included. Students benefiting from minor infrastructure improvements are excluded. Students are counted cumulatively for each year the inputs are completed, without counting the same student twice.

*Students* are those enrolled in new or improved learning or training institutions.

Facilities include primary schools, secondary schools, formal technical vocational education and training institutions, colleges, polytechnics, and universities.

New or improved facilities include classrooms, libraries, laboratories, workshops, clean water sources, distance education equipment, and/or information and communication technology for instructional purposes.

Improved can mean either newly constructed or upgraded during the project period. Newly constructed means new construction completed during the project.
**Upgraded** means existing facilities that receive (i) major repairs or renovation as defined in project planning documents, (ii) upgrading of computer rooms or laboratories, (iii) clean water sources, (iv) connection to electricity, (v) computers for instructional purposes, (vi) laboratory equipment and furniture, (vii) library furniture and books, (viii) furniture for students and teachers, (ix) internet connections, or (x) distance learning equipment.

Sources: PCRs and RRPs.

<table>
<thead>
<tr>
<th>20. Students educated and trained under improved quality assurance systems (number)</th>
<th>Total number of students benefiting from improved quality assurance systems under the projects.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Female</td>
<td>Each student is counted only once, regardless of the number of years a student attends the education or training institution, or of the number of inputs associated with improved quality systems the education or training institution receives. All students benefiting from cofinanced projects are included. Students benefiting from minor infrastructure improvements are excluded. Students are counted cumulatively from the year the first input is completed to the subsequent years new inputs are added.</td>
</tr>
<tr>
<td>• Male</td>
<td><strong>Students</strong> are those enrolled in private or public primary, lower secondary, or secondary schools; colleges; vocational training institutions; polytechnics; or universities covered under the project.</td>
</tr>
</tbody>
</table>

**Education and training** can refer to subsectors of education systems such as pre-primary and basic, upper secondary, formal technical vocational education and training, and higher education.

**Quality assurance systems** are country specific referring to developing member countries' own systems and include (i) standards for service delivery or learning outcomes, (ii) a means for verifying achievement of standards, and (iii) a mechanism for implementing standards directly in education or training institutions.

**Improved quality assurance systems** include operations that:

(i) invested in improved quality standards (e.g., minimum service delivery standards for education and training institutions, learning standards in the curriculum, competency-based teaching and learning systems, qualifications frameworks, and instructional staff qualifications) and a means for verifying progress toward achievement of those standards (e.g., certification, compliance
reviews, accreditation, institutional census surveys, learning assessments, and qualifying examinations);

(ii) financed inputs that enable education or training institutions to meet particular quality standards (e.g., teacher training, reformed examination, facility improvement grants for inputs directed at meeting standards, and improved facilities);

(iii) used a mechanism for verifying progress toward achievement of standards (e.g., institutional census, project surveys, learning assessments, and qualifying examinations); and

(iv) defined a finite number of project education or training institutions receiving such inputs.

Sources: PCRs and RRPs.

21. **Teachers trained with quality or competency standards (number)**

- Female
- Male

Number of teachers trained who are likely to improve teaching practices and support improvements in curriculum, textbooks, or pedagogy. This includes the following:

(i) Teachers who are full time, part time, or government paid or contracted. Teachers, principals, instructors, lecturers, and professors covered by the project are included.

(ii) Preservice: Candidate teachers enrolled in training programs that have been strengthened by the project and result in qualifications or certification.

(iii) Upgrading: Teachers receiving in-service training that has been strengthened under the project and leads to certification or licensing.

(iv) In Service: The number of teachers receiving in-service training in specific subject areas or specific pedagogies where the training program has defined competencies and means for assessing attainment of competencies.

Each teacher is counted only once, regardless of how many times he/she participated in pre- and/or in-service programs.

If a teacher training institution receives upgrading through civil works and/or equipment, enrolled trainees are not counted unless teacher quality standards are also strengthened under the project.

The faculty of teacher training institutions is excluded from the count unless they directly teach in classrooms.

The number of teachers is counted cumulatively as follows:
(i) **Preservice**: Number of teachers enrolled in the strengthened program. If the program is multi-year, add only the new intake for subsequent years;

(ii) **In-service leading to certification**: Number of teachers receiving certificates or licenses under the strengthened program; and

(iii) **Short-course in-service**: Teachers who participate in two or more short courses meeting quality standards are counted once.

Teachers trained under cofinanced projects are included provided the training meets ADB’s definition of quality standards.

Teacher trainers, methodologists, administrators, supervisors, government officials, and principals without any direct teaching role or receiving training in administration only are excluded. If teacher trainers who are also working as teachers are trained, then they are counted.

**Quality standards** for teacher training are those defined in each project. These may include (i) definitions of teacher skills and/or competencies (skills and competencies can be subject specific and/or general good teaching practices), and (ii) a means of assessing whether trainees have achieved the competencies or met the standards. These can include portfolio assessment, observed teaching, examinations, and/or satisfactory completion of required courses or modules.

Teachers participating in study tours, peer learning networks, and courses subsidized by the project but taken from unaccredited outside providers are not counted.

**Sources**: PCRs and RRPs.

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**Regional Cooperation and Integration**

<table>
<thead>
<tr>
<th>22. Cross-border transmission of electricity (gigawatt-hours per year)</th>
<th>Cross-border electricity, in Gigawatt hours, transmitted annually based on PCRs circulated during the year. Achieved outputs of projects with the thematic classification of regional cooperation and integration are counted.</th>
<th>Source: PCRs and RRPs.</th>
</tr>
</thead>
</table>

| 23. Cross-border cargo volume facilitated (tons per year) | Volume of cargo that crossed borders that are facilitated by ADB operations contributing to regional | |
connectivity. Such operations may include regional road construction and rehabilitation, and border infrastructure and systems improvement.

The figures on tons per year for vehicles that cross borders are based on figures reported in PCRs circulated during the year.

Achieved outputs of operations with the thematic classification of regional cooperation and integration are counted.

Source: PCRs and RRPs.

### Detailed Definitions and Guidelines for Use of SEDs

#### Transport

1. **Roads built or upgraded** (kilometers)
   - **Expressways and national highways**
   - **Provincial, district, and rural roads**

Length of roads built or upgraded, expressed in kilometers, disaggregated into:

(i) expressways and national highways (i.e., fully access-controlled roadways); and

(ii) provincial, district, and rural road networks built or upgraded in kilometers (i.e., roads without full access control)

**Fully access-controlled** implies (i) all cross traffic is fully grade separated (e.g., using overpasses); (ii) the use of a median crash barrier or wide median to physically separate both directions of travel; (iii) full segregation of motorized traffic from nonmotorized traffic, including pedestrians; (iv) prohibition of unsuitable vehicle classes and nonmotorized traffic from roadway use; and (v) use of roadside crash barriers or clear zones.

**Roads without full access control** may include kilometers of nonpaved road (tracks), if investments in these have been made through the project.

**Upgrading** includes all activity to restore a degraded road to its originally intended design capacity (repair or rehabilitation) and to improve on its design capacity (e.g., by widening). Upgrading of road signage only is excluded.
This calculation is not affected by bidirectional travel or the number of lanes (i.e., corridor kilometers are utilized, not lane kilometers).

Sources: PCRs and RRPs.

<table>
<thead>
<tr>
<th>2.</th>
<th><strong>Passengers on urban rail- and bus-based mass transit systems built or upgraded</strong> (average daily number in the first full year of operation)</th>
<th>Traffic benefiting from built or upgraded urban rail- and bus-based mass transit systems in the year after project completion. Passengers are defined to mean passenger trips. Each passenger trip is counted, regardless of whether it is the same passenger making multiple trips. Average daily number refers to an average work day (weekends and holidays are not to be used). Passenger trip numbers are collected from electronic fare system outputs or surveys. Sources: PCRs and RRPs.</th>
</tr>
</thead>
</table>

**Energy**

<table>
<thead>
<tr>
<th>3.</th>
<th><strong>Energy saved</strong> (terawatt-hour equivalent per year)</th>
<th>Annual energy savings is the sum of electricity and fuel savings, after converting fuel savings in terrajoules (TJ) to terawatt-hour equivalent per year. Fuel savings come from efficiency improvement due to the use of lesser fuel in terms of energy content (e.g., railway, district heating, and conversion of power plants from coal to combined-cycle gas turbine). Electricity savings result from efficiency improvements in supply (reduction of technical losses in generation and transmission) and demand (from industrial, commercial, and residential sectors). Energy saved is the energy savings resulting from a project or component of a project that involves efficiency improvement in energy use. Sources: PCRs and RRPs.</th>
</tr>
</thead>
</table>

**Water**

<table>
<thead>
<tr>
<th>4.</th>
<th><strong>Households with reduced flood risk</strong> (number)</th>
<th>Number of rural and urban households protected from flood risks through (i) urban projects that include flood management components, (ii) irrigation and water resources development projects that include flood management components, and (iii) stand-alone flood management projects.</th>
</tr>
</thead>
</table>
5. **Students educated and trained under improved quality assurance systems** (number)
   - Technical and vocational education

Total number of students benefiting from new or upgraded physical educational facilities. Students are those enrolled in vocational training institutions.

Technical and vocational education is comprised of formal, nonformal and informal learning related to the workplace. It includes the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. Through TVET, young people, women, and men learn knowledge and skills from basic to advanced levels across a wide range of institutional and work settings.

Each student is counted only once, regardless of the number of years a student attends the education or training institution, or of the number of inputs associated with improved quality systems the education or training institution receives. All students benefiting from cofinanced projects are included. Students benefiting from minor infrastructure improvements are excluded. Students are counted cumulatively from the year the first input is completed to the subsequent years new inputs are added.

Quality assurance systems are country specific referring to developing member countries' own systems and include (i) standards for service delivery or learning outcomes, (ii) a means for verifying achievement of standards, and (iii) a mechanism for implementing standards directly in education or training institutions.

Improved quality assurance systems include operations that:
(i) invested in improved quality standards (e.g., minimum service delivery standards for education and training institutions, learning standards in the curriculum, competency-based teaching and learning systems, qualifications frameworks, and instructional staff qualifications) and a means for verifying progress toward achieving those standards (e.g., certification, compliance reviews, accreditation, institutional census surveys, learning assessments, and qualifying examinations);
(ii) financed inputs that enable education or training institutions to meet particular quality standards (e.g., teacher training, reformed examination, facility improvement grants for inputs directed at meeting
standards, and improved facilities); (iii) used a mechanism for verifying progress toward achievement of standards (e.g., institutional census, project surveys, learning assessments, and qualifying examinations); and (iv) defined a finite number of project education or training institutions receiving such inputs.

Sources: PCRs and RRPs.

6. **Teachers trained with quality or competency standards (number)**
   - **Technical and vocational education**

   Number of teachers trained who are likely to improve teaching practices and support improvements in curriculum, textbooks, or pedagogy.

   Technical and vocational education is comprised of formal, nonformal and informal learning related to the workplace. It includes the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. Through TVET, young people, women, and men learn knowledge and skills from basic to advanced levels across a wide range of institutional and work settings.

   Teachers include the following:
   (i) Teachers who are full time, part time, or government paid or contracted. Teachers, principals, instructors, lecturers, and professors covered by the project are included.
   (ii) Preservice: Candidate teachers enrolled in training programs that have been strengthened by the project and result in qualifications or certification.
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   Each teacher is counted only once, regardless of how many times he/she participated in pre- and/or in-service programs.

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Sources: PCRs and RRPs.