

# User Guidelines for the Integrated Approach to Family Planning Data Quality Assessment



February 2021



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## Data for Impact

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## ABBREVIATIONS

AW	all women
DHS	Demographic and Health Survey(s)
D4I	Data for Impact
EMU	estimated modern use
FP	family planning
FPET	Family Planning Estimation Tool
HMIS	health management information system(s)
M&E	monitoring and evaluation
MCH	maternal and child health
mCPR	modern contraceptive prevalence rate
MICS	Multiple Indicator Cluster Survey(s)
MOH	Ministry of Health
MW	married women
PMA	Performance Monitoring for Action
RDQA	Routine Data Quality Assessment
SS TO EMUSS TO EMU	Service Statistics to Estimated Modern Use
UNPD	United Nations Population Division
USAID	United States Agency for International Development
VF	verification factor
WPP	World Population Prospects

## BACKGROUND

Health management information systems (HMIS) represent the single most important investment made by countries to monitor and manage the provision of health services, especially by the public sector. In the past decade, there has been an important shift from HMIS that were mainly paper-based toward web-based systems that aggregate data from facilities and provide a platform through which performance is tracked at national and subnational levels. These web-based platforms include the [DHIS2](#), which is one of the most commonly used HMIS platforms, and other country-developed systems. They represent a new opportunity to improve which data are prioritized and what indicators are used to monitor performance. The degree to which these platforms are leveraged depends on the characteristics of the health programs for which data are collected. Programs such as HIV and AIDS, malaria, and tuberculosis are typically more heavily resourced with staff capacity for analysis, management interest in program review, and government and donor interest in their performance. Other programs, such as family planning (FP) and maternal and child health (MCH), are less well-resourced in Ministries of Health, and have less capacity, which has implications for programmatic use of HMIS data. The lack of engagement with and use of these data perpetuate lapses in data quality assurance, and create an environment with a greater tolerance for poor data quality and poor signaling function of selected indicators. In the context of heavy donor dependence, stewardship capacities are critical to ensure the value and visibility of routine data, but difficult to negotiate when these capacities are limited.

For FP programs, in particular, efforts to assess and improve the quality of FP data are often poorly planned and uncoordinated, leading to inconsistent findings, duplication of effort, and poor management of already limited resources. Decisions on where to target resources for improving data quality are often based on where there may be partner resources and interest, as opposed to where the resources may be most needed or well spent. Dependencies of this kind also lead to an increased burden on national programs to manage the application of multiple partner-developed tools and systems, and attempts to integrate or triangulate their information with existing HMIS data without the duplication of reported data.

The [MEASURE Evaluation](#) project that ended in 2020, and its affiliated associate award, Data for Impact (D4I), both funded by the United States Agency for International Development (USAID), and the [Track20](#) project funded by the Bill & Melinda Gates Foundation, are projects whose work focuses on improving HMIS data quality and use. These guidelines represent their joint effort to target data quality in a way that accounts for limited resources in FP programs by providing a framework to integrate two tools specifically developed for HMIS data quality and use through a top-down and bottom-up approach. The combined approach was developed in partnership with Track20 monitoring and evaluation (M&E) officers seconded to Ministries of Health in Cote d'Ivoire, Cameroon, Democratic Republic of Congo, and Togo, who provided input on how programs can practically use guidance in light of resource limitations.

During its long tenure, [MEASURE Evaluation](#) developed and pioneered several tools and processes for evaluating data quality, which have been applied in numerous countries in multiple health program areas, including FP. With the end of the MEASURE Evaluation project in 2020, this work is being carried forward by several associate awards, including D4I. The Routine Data Quality Assessment tool, or [RDQA](#), a shorter version of the more extensive Data Quality Audit tool, *allows programs and projects to assess the quality of their data on a regular basis and strengthen their data management and reporting systems* (MEASURE Evaluation, 2017). Broadly, the tool was developed for *routine* supervision to enable program officers to self-assess data quality and understand where the priority needs might be for targeted supervision and strengthening. The strength of this tool is the comprehensiveness of the data review, which considers provider capacities, so that the data quality and the interpretation and use of data improve over time. Importantly, the data quality review process takes place at the facility level, or at the lowest level of the health system where service statistics are generated and recorded and later compiled for monthly or quarterly reporting. The facilities for the RDQA are selected based on convenience sampling. The challenge for FP programs is to secure the time and funds to enable *routine*

*supervision* in the way envisioned by the tool, target available resources, and identify which facilities may benefit most from such an intensive process.

Track20 developed a tool and a process for evaluating data quality and use and for preparing annual estimates of core FP indicators. It is called the [Service Statistics to Estimated Modern Use \(SS to EMU\)](#) tool. The tool converts FP service statistics data into one single metric, Estimated Modern Use (EMU). The EMU can be used to track population-level changes in contraceptive use at regional and national levels, and across national levels. The SS to EMU tool assists users to review a country or region's service statistics—an important step in itself—and then allows them to convert those data into the EMU, which can be compared with the modern contraceptive prevalence rate (mCPR) from surveys or other models. The Track20 approach, in contrast to the RDQA approach, is a top-down method of identifying data quality issues. The tool allows the user at the national level to identify which subnational regions and/or which FP methods are the source of inconsistency in the data. Existing web platforms like DHIS2 allow the user to then drill down from the subnational level all the way to the facility level.

Combining the RDQA approach with the SS to EMU approach for identifying sources of “quality data issues” in data represents an important step toward improving targeting data management and quality analysis and moving these approaches to facilities and subnational levels with the greatest need.

## PURPOSE AND OBJECTIVES

The purpose of this document is to provide guidance to Track20 M&E officers, FP data managers, and M&E officers on how to use the SS to EMU and RDQA integrated approach to assess and monitor FP data quality performance.

The specific objectives are to:

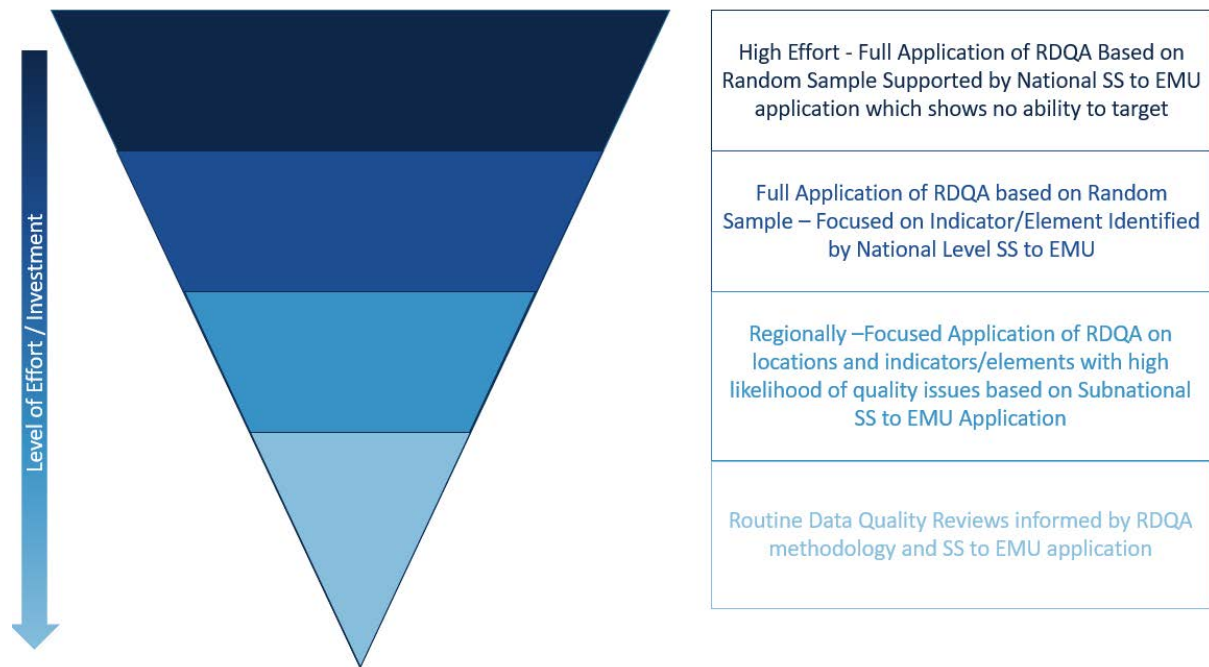
- Understand how the SS to EMU and RDQA methodologies and tools can be used in conjunction with each other to produce comprehensive and accurate measures of FP data quality performance.
- Use the data collected by the implementation of the integrated SS to EMU and RDQA approach to compare routinely collected FP data with survey data.
- Develop targeted recommendations to help improve FP data quality and foster the development of trust and accountability in the health system.

## WHAT ARE THE INTEGRATED SS TO EMU AND RDQA APPROACH?

The integrated approach is a road map for countries on how to accomplish routine data quality reviews based on resource availability and priorities. It presents a continuum of data quality assurance options, ranging from a regularly scheduled, (i.e., quarterly) application of the RDQA when resources are not limited, to use of the RDQA in modified forms requiring lower levels of effort and resources. An application of the SS to EMU tool at national and subnational levels will help inform where countries fall along this continuum, by signaling where data quality problems are located and whether they are limited to specific regions and/or certain FP methods, or are more ubiquitous and cannot benefit from targeting.

Figure 1 describes the continuum and the way that the two tools interact along this continuum.

**Figure 1. Data quality assurance options and level of effort required**



Source: Data for Impact, 2020

The integrated approach combines important features and processes from both the RDQA and the SS to EMU tools to solve the practical challenges faced by FP programs in conducting data quality assurance activities. The first challenge is limited staff capacity and limited resource availability to conduct data quality assurance activities. A RDQA is a robust methodology that can be resource intensive if administered in its complete form and on a regular basis. The integrated approach draws on the robust, quantitative approach taken by the RDQA while at the same time attempting to minimize the resources needed through better targeting.

The second challenge is determining the appropriate health system level at which the data quality review should take place. One of Track20’s objectives is to routinize national-level review of data through its system of direct support to government technical staff and HMIS systems. The SS to EMU tool makes it possible for national-level actors to obtain a better understanding of routinely collected FP data quality and availability for national-level action. Moreover, the SS to EMU tool can help identify the regions where data quality is the most poor, or the FP methods where there is greatest concern between the quantity supplied and distributed. The RDQA tool can then be applied to target those regions or those indicators to look at more granular data.

The third challenge is the limited opportunities or mechanisms for systematic translation of findings from routine data quality assurance activities to strengthening HMIS systems in a systematic way. Often these types of activities are carried out in an ad-hoc fashion or project-by-project basis because of limited foresight and coordination.

An integrated approach attempts to solve these challenges in the following ways:

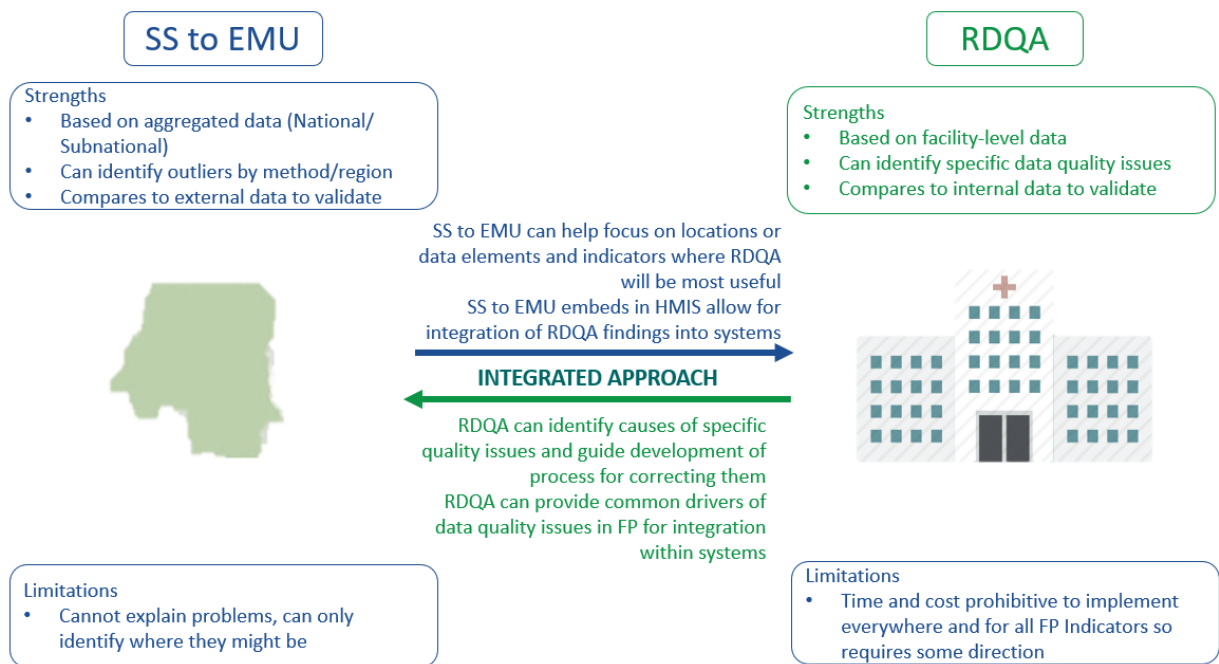
- Start with a top-down (from central- to health facility-level) approach using the SS to EMU tool to improve targeting and/or prioritization of when and where a RDQA may be most useful.
- Conduct RDQA(s) at a limited number of facilities (selected using purposive sampling) to understand the drivers of the data quality issues identified through the top-down approach.



- Integrate feedback on these drivers to national-level stakeholders through national-level review meetings.
- Improve national-level routine review systems/FP HMIS dashboards by identifying elements of the RDQA, such as data verification and cross-checks, which can be integrated into ongoing routine supervision visits, data monitoring meetings, and district-/regional level periodic coordination meetings.

Figure 2 illustrates the strengths and limitations of the individual tools and the value of taking a combined approach.

**Figure 2. SS to EMU and RDQA: Individual versus integrated approach**



Source: Data for Impact, 2020

## THE PROCESS OF INTEGRATION

The integration of the two processes requires the following steps:

1. Complete national- and subnational-level runs of the SS to EMU (by Ministry of Health [MOH] staff at the national level).
2. Identify the specific methods, years of HMIS data, and subnational levels that show the most “noise” in signals (SS to EMU process, conducted at the national level).
3. Use the Track20 national consensus meeting forum to get input from HMIS and program staff to identify data quality priorities for the program.

4. Determine whether the data quality priorities can be addressed through a partial or full application of the RDQA tool.
5. Implement the RDQA at a sample of facilities in high priority regions using program and HMIS staff focusing on priority methods.
6. Use the results of the RDQA to provide an analysis of the common drivers of poor data quality for the priority regions and methods to the subnational and national levels.
7. Determine how data quality checks in national systems for FP data review need to be adjusted to reflect learning from the RDQA findings (MOH program staff, HMIS staff and partners).

The integrated approach will help users improve the following functions:

- **Understandability:** FP information are understandable when users from different FP institutions at any level of the health system can process and explain indicator trends and data quality.
- **Actionability:** FP information are actionable when users from different FP institutions at any level of the health system can use information about data quality to implement actionable steps that will either maintain data quality (if data quality is found to be good), or will improve data quality (if data quality is found to be poor).

An overview of the core methodology of these two tools helps illustrate how the integrated process accomplishes the goal of improving data quality in the context of FP.

## The SS to EMU Methodology

The SS to EMU methodology and tool converts routinely collected and reported FP service statistics (e.g., FP commodities distributed to clients, FP visits, or FP users) into one single metric—EMU—which estimates the use of FP services in a population of women of reproductive age. The EMU is meant to approximate total contraceptive use. It is important to note that it is not a direct measure of contraceptive prevalence. However, it can help countries estimate the total volume of FP services in years between surveys, and can also be used for annual or quarterly/monthly monitoring. With the EMU, countries can use their own data to answer such questions as, “since our last survey, has our trend in contraceptive use slowed down, stayed the same, or accelerated?” and “what does that mean for our programming and investments?”

The SS to EMU tool assists countries to review their FP service statistics data, an important step in itself, and then converts the data into the EMU, which can be compared with mCPR trends from surveys or other modeled estimates of mCPR. It should be noted that there is no expectation that the level of the EMU will compare with the mCPR; rather, it is the trends of the two indicators that provide information on changes in contraceptive use.

### Key Components of the SS to EMU

The SS to EMU tool has three key components: (1) data entry (described below); (2) data quality review, including (a) internal validation that reviews each type of service statistic to identify outliers, anomalies in method-specific and overall trends, and internal consistency across different types of service statistics data, and (b) external validation, which includes benchmarking against surveys and modeled estimates; and (3) decision making about the findings on quality for each type of service statistic. This step determines which type(s) of data are used going forward. *These three components provide the top-down framework needed to prioritize where RDQAs are needed and why.*

## RDQA Methodology

The RDQA tool assesses the strengths and weaknesses of the underlying data management and reporting system for standard program-level output indicators that are collected and reported through a country's HMIS. The tool assesses five functional areas of a data management and reporting system: (1) M&E Structure, Functions, and Capabilities; (2) Indicator Definitions and Reporting Guidelines; (3) Data Collection and Reporting Forms and Tools; (4) Data Management Processes; and (5) Use of Data for Decision Making. In addition to assessing the system, for specific data elements or indicators of interest, it also verifies the quality of reported data against data recorded in the primary source documents such as registers and client files. The secondary sources are the aggregated data into paper-based reports or electronic data system.

### Key Components of the RDQA

The RDQA has two key components: (1) assessment of the quality of selected indicator data (i.e., data verifications) and (2) assessment of the strengths and weaknesses of the overall data management and reporting system (i.e., system assessment).

- Data verifications

This component of the RDQA tool allows users to recount indicator data for selected indicators of interest for a specified timeframe directly from source documents and conduct a quantitative comparison of recounted data to reported data. It assesses data collection and reporting accuracy, and the completeness, timeliness, and availability of data and reports at service delivery sites (i.e., health facilities) and intermediate sites (i.e., the district health management office, regional health management office).

- System assessment

This component of the RDQA tool allows the user to perform an assessment of the strengths and weaknesses of the core functional areas of a data management and reporting system. This part of the tool helps identify potential threats to data quality posed by the design and implementation of the data management and reporting system.

## WHO SHOULD USE THE INTEGRATED SS TO EMU AND RDQA APPROACH?

Data managers, HMIS focal persons, and M&E specialists should use the integrated approach because they are tasked with providing and supervising high-quality data. The tool helps users select from the many data elements available in health system records to determine those that present poor quality and can be assessed at any level of data recording and aggregation.

## IMPLEMENTATION OF THE INTEGRATED APPROACH TO DATA QUALITY ASSESSMENT

The integrated approach is intended to be conducted as part of routine FP technical working group meetings or annual national consensus meetings. This ensures that government processes and mechanisms are used. FP data quality and EMU estimates are discussed at annual consensus meetings. They provide the first step in understanding where countries may fall in the data review continuum. Technical staff in the FP program, along with their HMIS counterparts and program heads, should use the integrated approach to identify where their program sits in the continuum, and the data priorities and resources available to support the data review.

Applications of the SS to EMU tool are done by national program staff, whereas RDQAs are implemented by data review teams organized to align with the schedule of planned routine HMIS supportive supervision meetings so that information obtained can be incorporated for such meetings, and also to inform national-level feedback mechanisms, including working groups at the national level.

### SUMMARY OF THE INTEGRATED APPROACH


In summary, the integrated approach first involves the application of the SS to EMU tool, and the subsequent use of the findings to geographically target where the RDQAs will take place (i.e., which regions or districts) and what indicators they will focus on. The RDQA findings are typically shared at the facility and subnational levels; however, with the integrated approach, findings will also be shared upstream with the national level during routine FP data review meetings. Through this integrated approach, the individual strengths and purpose of each individual tool are retained, while applying them in an integrated manner enables improved technical focus and resource allocation. It allows FP to benefit from the comprehensive nature of the RDQA methodology and tool, while keeping it relevant to the process and systems being used in the country. In this way, the RDQA can be leveraged more frequently and more consistently for FP, both within and across countries, where the need for improved routine data quality is critical.

### HOW TO USE THE SS TO EMU TOOL FOR DATA QUALITY DESK REVIEW

#### 1. Inputting Data

Tab 1: Country and Language Setup

The user can select English or French. The language selection should be carefully considered based on who will be inputting and using the data, and which language will best serve the needs. Once the language is selected, it should not be changed. Changing the language selection after beginning the process can create errors. (Ref Appendix A)

Set Up : Language and Country Information		Boxes in gold indicate a place where you need to enter data or select from a dropdown.	
1	Select the Language	English	Select from the dropdown list
2	Select the Country	Papua New Guinea	Select from the dropdown list
3	Are you using national or subnational data?	National	
4	Does your family planning data include all women or only married women?	All Women	Select "All Women" unless your family planning program exclusively serves married women.
5	What is the most recent year for which you have complete service statistics data?	2019	
			

Tab 2: Population and Prevalence

This tab will automatically populate with the most recent survey data from the Demographic and Health Survey (DHS) and Multiple Indicator Cluster Surveys (MICS), where available, and trend estimates of mCPR for Married Women (MW) and All Women (AW) from the United Nations Population Division (UNPD) World

Population Prospects (WPP). There are also fields for the input of additional survey data (Performance Monitoring for Action [PMA], national, etc.) or an updated Family Planning Estimation Tool (FPET) value for each year, if the model has been run in advance of using this tool.<sup>1</sup> These data should be reviewed and updated if any values are missing.

**Set up: Enter Background Data - Population and Prevalence** Timor-Leste : National

Boxes in gold indicate a place where you need to enter data or select from a dropdowns.

Boxes in light yellow indicate a place where data is automatically populated or calculated, but you can replace it if you have more recent data. Please document any changes that you make to the default data

Population and Prevalence Data										
*Review data and add any missing surveys or data points:										
	Population : Women of Reproductive Age	DHS		MICS		PMA		UNPD*		
		mCPR (MW): DHS	mCPR (AW): DHS	mCPR (MW): MICS	mCPR (AW): MICS	mCPR (MW): PMA	mCPR (AW): PMA	mCPR (MW): UNPD*	mCPR (AW): UNPD*	
2005	215,185								13.6%	9.4%
2006	220,659								14.9%	10.1%
2007	226,743								16.5%	11.0%
2008	233,200								18.3%	12.0%
2009	239,650	21.1%	12.8%						20.1%	13.0%
2010	245,990								21.2%	13.5%
2011	253,557								21.9%	13.8%
2012	260,716								22.3%	14.0%
2013	267,744								22.7%	14.1%
2014	275,059								23.0%	14.2%
2015	282,817								23.4%	14.4%
2016	291,198	24.1%	14.8%						23.8%	14.5%
2017	299,702								24.6%	14.9%
2018	308,230								25.6%	15.3%
2019	316,656								26.6%	15.7%

Source for pop, if changed:

\* UNPD estimates are sourced from Estimates and Projections of Family Planning Indicators 2020  
Note - If unedited, population data is sourced from UNPD's World Population Prospects 2019

Next

### Tab 3: Service Statistics

There are four types of service statistics data that can be input into the SS to EMU tool to generate the EMU. They are FP commodities distributed to clients, FP commodities distributed to health facilities, FP visits, and FP users. Select the service statistics that you have available for input.

**Set-up: Select the types of service statistics data you have available and enter information about that data.**

**Contraceptive Commodities**

Contraceptive commodities distributed to clients	Contraceptive commodities distributed to facilities
Do you have data on contraceptive commodities? <b>Yes</b> Source: <b>DHS2</b> (HMIS, DHIS2, LMIS) First year of data available: <b>2012</b> Most recent full year of data available: <b>2018</b> What sectors are reporting? <b>Public and Some Private</b> <i>select from the dropdown list</i>	Do you have data on contraceptive commodities? <b>No</b> Source: <b></b> (HMIS, DHIS2, LMIS) First year of data available: <b></b> Most recent full year of data available: <b></b> What sectors are reporting? <b></b> <i>select from the dropdown list</i>

**FP Visits and Users**

FP Visits	FP Users
Do you have data on FP visits? <b>Yes</b> Source: <b>DHS2</b> (HMIS, DHIS2, LMIS) First year of data available: <b>2012</b> Most recent full year of data available: <b>2018</b> What sectors are reporting? <b>Public and Some Private</b> <i>select from the dropdown list</i>	Do you have data on FP users? <b>Yes</b> Source: <b>DHS2</b> (HMIS, DHIS2, LMIS) First year of data available: <b>2012</b> Most recent full year of data available: <b>2018</b> What sectors are reporting? <b>Public and Some Private</b> <i>select from the dropdown list</i>

<sup>1</sup> The Family Planning Estimation Tool is a Bayesian hierarchical model created in partnership with the UNPD, Amherst University, and Track20 that produces annual estimates for CPR, unmet need, and demand satisfied. An innovation in the FPET is that EMU can be included in the estimation, allowing service statistics to influence these indicators in years after the most recent survey. For more information, go to [http://www.track20.org/pages/track20\\_tools/FPET.php](http://www.track20.org/pages/track20_tools/FPET.php).

**Long-Acting Methods : Introduced or Scaled-Up?**

NOTE below any methods INTRODUCED/SCALED UP in the FIRST YEAR of data available for each data type and method.

In order to more accurately estimate long-acting users, we need to account for women who received their method prior to the first year of data. To help estimate the number of long-acting users who received their method prior to the first year of data, please note below any methods that were newly introduced or undergoing substantial scale-up in the FIRST YEAR of data available, by data type and method. If methods were NOT newly introduced or scaling up in the first year of data, leave the cells BLANK.

		Contraceptive commodities distributed to clients	Contraceptive commodities distributed to facilities	FP Visits
First year of data available:		2012	N/A	2012
Sterilization	Tubal Ligation (F)			
	Vasectomy (M)			
IUD	Copper-T 380-A IUD	Scaling Up		Scaling Up
	LNG-IUS			
Implant	Implanon	Newly Introduced		Newly Introduced
	Jadelle			
	Sino-Implant			

Tab 4: FP Source – Private Sector Adjustment Set Up

Generally, FP is provided in both the public and private sectors. However, not all private providers report to the government HMIS. The Private Sector Adjustment is intended to help account for the FP services that are being delivered through sources that are not represented in the government HMIS, based on survey data on contraceptive source and input from the tool user. The sectors are denoted as Public, Private, and Other. If the user previously indicated that the sectors report to the HMIS, they will be colored green or yellow. If the sector(s) do not report to the HMIS, it will appear grey. The colored cells can be further classified as “Yes/No/Partially” from the drop-down menu to indicate what portion of the sector(s) the user previously indicated were reporting into the HMIS. This guides the tool’s handling of the private sector adjustment. The EMU can be used without this adjustment if the intent is to monitor only public sector FP programs, or it can be adjusted to cover the full market (including the private sector) for overall monitoring.

**Step 2 of 3: What sectors are reporting in your data?**

Based on what you entered on the previous sheet, in your summary of FP Sources, review the table below and select from the dropdown to indicate which sectors are included in the service statistics data you have on hand.

Data Type	Sectors Reporting	Public Sector	Private Medical Sector			Other Source	
		Government Health Facilities and Home/Community Delivery	NGO	Private Hospital/Clinic Delivery	Pharmacy	Shop/Church/Friend	Other
Contraceptive commodities distributed to clients	Public and Some Private	Yes	Partially	Partially	No	No	No
Contraceptive commodities distributed to facilities	N/A					No	No
FP Visits	Public and Some Private	Yes	Partially	Partially	No	No	No
FP Users	Public and Some Private	Yes	Partially	Partially	No	No	No

Leaving a cell blank assumes that a sector is not represented in your data = 0% //Laisser une cellule vide suppose que ce qui n'est pas représenté dans vos données = 0%

**Step 3 of 3: Review your Adjustment Factor**

In the table below, for each type of data available, the value represents the adjustment factor that will be multiplied by your FP Commodity/Visits/Users data in order to inflate the values to represent the full market (ALL public and private FP Provision). If the value in the table is 1.00, then it is assumed that your data represents ALL of that FP method provided in the country (based on the data from DHS and your answers above). If the value in the table is greater than 1, it is assumed that your data DOES NOT represent all of that type of commodity/service provided in the country. Your data will be multiplied by that value to estimate the total number of that FP method provided in both the public and private sector in the country.

Method	Contraceptive commodities distributed to	Contraceptive commodities distributed to	FP Visits	FP Users
Long Acting and Permanent Methods	Sterilization (F)	1.02	n/a	1.02
	Sterilization (M)	1.00	n/a	1.00
	IUD	1.05	n/a	1.05
	Implant	1.07	n/a	1.07
	Injectable	1.02	n/a	1.02
Short-Term Methods	Pill	1.08	n/a	1.08
	Condom (M)	1.00	n/a	1.00
	Condom (F)	1.00	n/a	1.00
	Other Modern Methods	1.00	n/a	1.00
	Emergency contraception	1.00	n/a	1.00



\* You may choose to adjust condom data to account for private sector provision, however we recommend leaving the condom values unadjusted to avoid overestimating condom use. Selecting "adjusted" from the dropdown list to the right will adjust your condom estimates to account for the private sector.

You are inflating by a factor of 2 or more to account for the private sector.  
You are inflating by a factor of 10 or more to account for the private sector.

## Tab 5. Contraceptive Method Mix Set Up

Note that the “next” arrow on this page is divided into four sections. Each arrow section leads to a separate Input Tab for each service statistic data type. Click on each arrow to go to the appropriate input tab and enter data for all available data types.

**Set up : Contraceptive Method Mix**
*Timor-Leste : National*

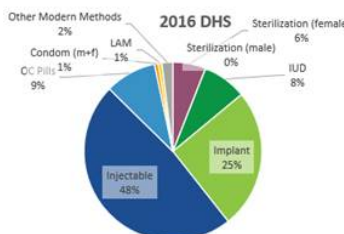
Data on the mix of modern contraceptive methods will be pre-populated from the latest survey available since the 2018 FP2020 report. If a more recent survey is available, you can select "yes" in step 2, then enter the prevalence, by method, in the yellow cells on the right. The modern method mix will be calculated in the left column and shown in the graph.

**1** Most recent source of national method mix preloaded is 2016 DHS

**2** Is there a better or more recent source you would like to use? No

**3**

Source & Year	Modern Contraceptive Method Mix	N/A
2016 DHS		
Population	All Women	
Sterilization (female)	6.0%	
Sterilization (male)	0.0%	
IUD	8.0%	
Implant	25.3%	
Injectable	48.0%	
OC Pills	9.3%	
Condom (m+f)	0.7%	
LAM	0.7%	
Other Modern Methods	2.0%	



## Service Statistics Input Tabs

Each of the four types of service statistics has an Input Tab. Complete the tabs for each type of service statistic you are entering.

**Step 1: Enter Reporting Rates.** Reporting rates are calculated by most country’s HMIS. If there is a reporting rate specifically for FP, inputs tabs use that rate. Otherwise, the overall reporting rate can be used. The reporting rate represents the annual average of the percentage of facilities that submitted a monthly report from which the service statistics are derived. A reporting rate above 80 percent is recommended to ensure confidence in the EMU as a metric for regular monitoring and as an input for the FPET. If the reporting rate is below 60 percent, it is not recommended to use the final EMU metric generated as an input into the FPET. However, regardless of what the reporting rate is, working through the data review and going through the process of using the SS\_EMU tool can provide important insights into the quality of a country’s FP data.

For a country where the reporting rate falls between 60 percent and 80 percent, the decision about whether to use the EMU as an FPET input can be made on a case-by-case basis. In this situation, it may be helpful to consider the following:

- Are the same regions consistently reporting?
  - If there are certain regions that consistently do not report, thus resulting in a reporting rate that is less than 80 percent, the data may still be usable because the bias in the service statistics should be consistent across the years. Although the EMU value may not represent a national estimate of contraceptive use because the contributions of certain regions are missing, the value should still represent a trend of what is happening at the national level.
  - If there is inconsistency in which regions are reporting, with different regions failing to report in different years, the data may not be useable in the FPET because the source of bias is

User Guidelines for the Integrated Approach to Family Planning Data Quality Assessment

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inconsistent across the years. Variability in which regions are included or excluded across the years may create artificial trends in the EMU, showing misleading growth or decline based on which regions are included, even if there are differential levels of use or effort in those regions.

- Is there consistency in the reporting rate? Or does it vary year to year?
  - If the reporting rate is below 80 percent but is generally consistent across the years, the data may be usable in the FPET.
  - If the reporting rates are inconsistent across the years, the data may not be useable in the FPET. Large changes in reporting rates between years may imply artificial growth or decline that may be an artifact of the variability in the number of facilities represented in the data.
  - Inconsistency may not require the exclusion of all years of data; if reporting rates level out, the user may be able to use just those years of data for which there were consistent reporting rates.

Step 2: Enter Service Statistics. The user has previously selected all types of service statistics available in the country (Tab 3 “Service Statistics Set Up” described above). This section of the tool provides space for the user to enter data for each of the selected types.

- Annual service statistics data, by method, is entered for as many years as are available (monthly and quarterly data can also be used in modified versions of the tool).
- There is space for entering detailed method types (e.g., Depo-Provera vs. Sayana Press) if data are reported with that level of detail. If methods are not reported by specific type or if methods are grouped together (e.g., “Implants” instead of “Jadelle” and “Implanon”), the user should enter the level of detail for which the data are available.

### Input: Contraceptive commodities distributed to clients

Timor-Leste : National

#### STEP 1 of 3. ENTER REPORTING RATES FOR THE REPORTING FORM USED FOR THIS TYPE OF DATA

Enter the reporting rates for the form used to report this type of FP data for each year of data you have available. Review whether reporting rates are high enough and consistent enough to use the data.

	2012	2013	2014	2015	2016	2017	2018	
Reporting Rates	85%	85%	85%	85%	85%	85%	85%	

Reporting rates should be above 80% to use data in FPET. If rates are between 60% and 80%, please discuss with a Track20 Team Member

#### STEP 2 of 3. ENTER COMMODITIES DATA

Enter the annual commodities figures by method in the table below for whichever methods are used in your country. Enter data for each year.

				Contraceptive commodities distributed to clients							
METHOD		CYP FACTOR	UNITS	2012	2013	2014	2015	2016	2017	2018	
<b>Long Acting and Permanent Methods</b>											
Sterilization	Tubal Ligation (F)	10	years of protection	1,872	1,369	1,608	2,046	1,629	5,541	17,536	
	Vasectomy (M)	10	years of protection	128	138	522	941	1,347	1,947	2,124	
IUD	Copper- T 380-A IUD	4.6	years of protection	8,655	10,517	7,513	8,994	11,580	18,928	20,379	
	LNG-IUS	3.3	years of protection	6	232	79	56	332	638	289	
Implant	Implanon	2.5	years of protection	382	11,419	33,337	42,925	71,158	115,246	137,022	
	Jadelle	3.8	years of protection	65,040	94,658	77,525	96,814	133,325	185,430	171,290	
	Sino-Implant	3.2	years of protection	0	0	0	0	0	0	0	
<b>Short-Term Methods</b>											
Injectable	Depo Provera (DMPA)	4	per user per year	1,378,881	1,460,909	1,252,469	1,319,920	1,579,793	1,974,029	1,783,161	
	Noristerat (NET-Eri)	6	per user per year	0	0	0	0	0	0	0	
	Lunelle	13	per user per year	143,885	264,087	273,118	244,842	310,328	426,296	255,985	
	Sayana Press	4	per user per year	0	0	0	0	0	0	0	
	Other Injectable	4	per user per year	0	0	0	0	0	0	0	
Pill	Combined Oral (COC)	15	per user per year	351,692	280,804	269,667	317,416	283,285	461,413	499,564	
	Progestin only (POP)	15	per user per year	48,556	113,836	85,618	75,146	86,967	115,369	111,480	
	Other OC Pill	15	per user per year	0	0	0	0	0	0	0	
Condom	Male Condom	120	per user per year	2,941,788	2,154,517	2,215,113	2,470,301	4,948,791	5,417,109	5,433,621	
	Female Condom	120	per user per year	21,567	34,891	34,668	23,656	37,093	27,831	37,064	



**Step 3: Review Your Data.** The data you enter in Step 2 will populate graphs at the bottom of the worksheet to provide a visual representation of the data entered. Review each graphic, keeping an eye out for data that seem out of place. If outliers are detected, they could signify an error in data entry or in the proper understanding of how that indicator is being reported. In other cases, anomalies may reflect real short-term changes due to certain challenges. In this case, having a dialogue between the HMIS team and program staff is helpful to identify what change in the program or environment may have resulted in the change in the data. Any dramatic changes in trends (e.g., growth of >150% or decline of > 25% over one year) or outliers (e.g., input values that are more than two standard deviations from the average) will be automatically flagged in the comment boxes below each graphic to prompt the user to add notes to document the reason for any unexpected data. In the sample commodity to client input graphs below, the IUD graph will be flagged for dramatic increases and decreases due to the jump in 2016. The user is prompted to provide an explanation for the data anomaly, which may require additional investigation. Note that the condom data with a steadier trend is not flagged for comment.

Some questions to consider as you review the data:

- How are these trends being influenced by reporting rates? Should some years be excluded for having low or inconsistent reporting rates?
- Do trends look consistent with your understanding of current programs in FP?
- If declines in a given method are seen, are they consistent with changes in method availability, distribution, and your understanding of trends in method choice?
- If dramatic growth in a given method is seen, is this attributable to the introduction of a new method or new or expanded efforts to socialize that method? Or might it be attributable to changes in the reporting system/incentives?
- Are declines in one method accompanied by growth in another method, indicating women switching between methods?
- Are there any outlying values (i.e., very high or very low compared with the overall trend for the method)? If so, could this be a data quality issue?

### STEP 3 of 3: REVIEW YOUR DATA

Review the graphs below showing the data you entered above. Keep an eye out for any anomalies that might indicate errors. Once you have validated the data, click the arrow to take you to review your outputs.

<p>Please explain/S'il vous plaît, expliquez</p>	<p>Please explain/S'il vous plaît, expliquez</p>	<p>Please explain/S'il vous plaît, expliquez</p>														
<table border="1"> <tbody> <tr> <td>Outliers*</td> <td>Tubal Ligation (F), 2018.</td> </tr> <tr> <td>Decline seen in trend**</td> <td></td> </tr> <tr> <td>Dramatic growth seen in trend***</td> <td>Growth in TL is the result of expanded program introduced in 2016.</td> </tr> </tbody> </table>	Outliers*	Tubal Ligation (F), 2018.	Decline seen in trend**		Dramatic growth seen in trend***	Growth in TL is the result of expanded program introduced in 2016.	<table border="1"> <tbody> <tr> <td>Decline seen in trend**</td> <td></td> </tr> <tr> <td>Dramatic growth seen in trend***</td> <td></td> </tr> </tbody> </table>	Decline seen in trend**		Dramatic growth seen in trend***		<table border="1"> <tbody> <tr> <td>Decline seen in trend**</td> <td></td> </tr> <tr> <td>Dramatic growth seen in trend***</td> <td>Program is working to scale up Implant distribution</td> </tr> </tbody> </table>	Decline seen in trend**		Dramatic growth seen in trend***	Program is working to scale up Implant distribution
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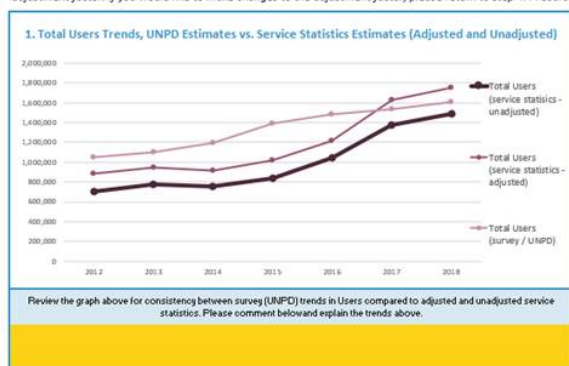
## 2. Reviewing Outputs

Review each Service Statistic Output Tab for unexpected data points. Once the data are entered in the relevant service statistics Input Tabs, review the associated Outputs Tabs. The Output Tab shows the EMU by method and modern method mix calculated from the service data you entered. These data appear at the bottom of the page.

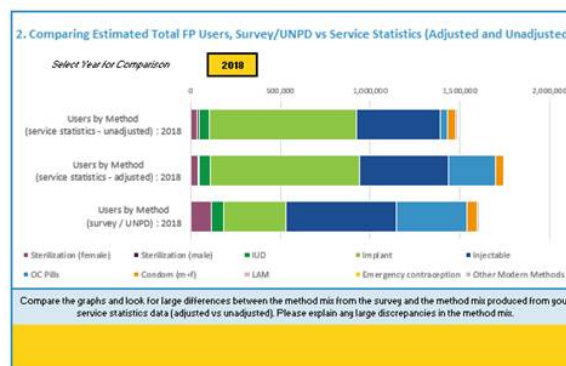
Step 1. Assess how the private sector adjustment affects your outputs. Previously, in the FP Source Set Up tab, a private sector adjustment was applied to help account for services provided by the private sector that are not included in your data. In this step, review the graphs and compare the adjusted and unadjusted estimates of users to determine whether the private sector adjustment is improving the estimates. Do adjusted or unadjusted values align better with the UNPD trend and method mix from surveys? The private sector adjustment can be revisited at this time if it appears to be distorting the estimates of users. To make changes to the adjustment factor, return to Tab 4, step 3.

### STEP 1 of 3. Review the graphs below showing the impact of the private sector adjustment.

These graphs have been designed to help illustrate the impact of the private sector adjustment, which is intended to help account for services provided by sectors that are not included in your data. Please review the impact of the adjustment factor. If you would like to make changes to the adjustment factor, please return to step 4. FPSource Set Up.



OPTIONAL: Return to FP Source Set Up to review Private Sector Adjustment



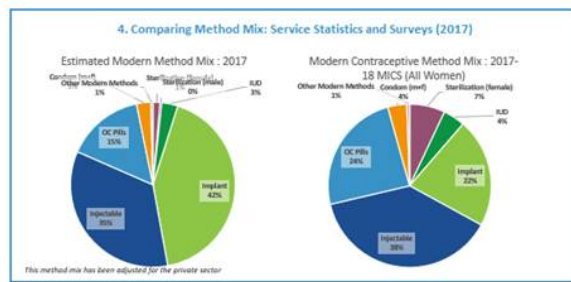
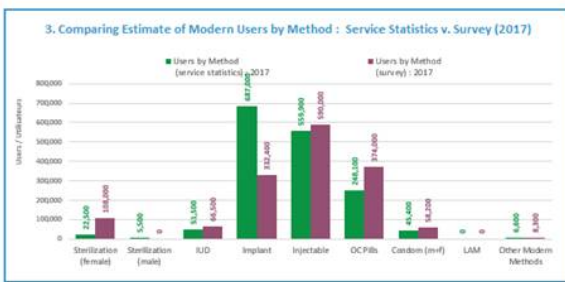
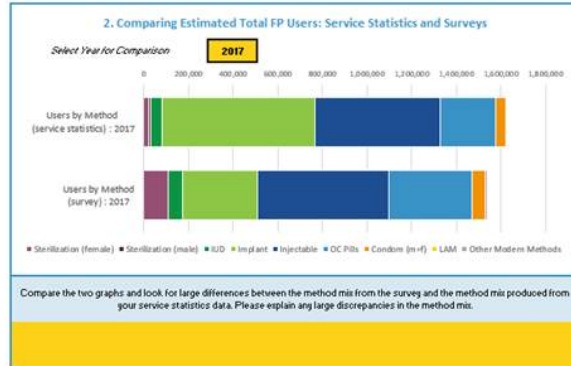
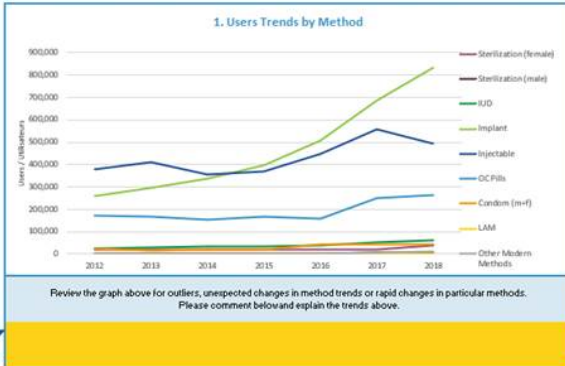
Note - condoms in the 'adjusted' values above and the graph values below have NOT been adjusted. This is in line with Track20 recommendations.

Step 2. Review trends and comparability of the service statistics to survey data. Use the graphs to make a visual comparison. The user can provide any observation notes in the yellow boxes that appear below each graph. When reviewing, keep in mind the following:

- How do the trends in use by method look? Are specific methods increasing/decreasing? If so, is this consistent with your understanding of what is actually happening?
- How does the method mix look? Is the most common method based on service statistics consistent with the most common method captured in surveys? Is it consistent with what is understood about contraceptive use in the country/region?
- How do the service statistics and survey data differ?
- Why do you think they differ? If so, can you explain the difference?
- In cases where the actual data points are different, are the trends still similar?
- How does the overall trend from the EMU compare with the trends from surveys (if available) or from the UNPD FPET?
- Consider the growth rates—is the growth rate from your EMU higher or lower than that of surveys or modeled estimates? Does the growth rate seem feasible? How does it compare with and without condoms?

**STEP 2 of 3. Review and comment on the graphs below.**

These graphs have been designed to help identify potential issues with the service statistics data and analyze trends and comparability with surveys.



Step 3: Confirm the exclusion of condom data from the EMU calculation. The default setting of the tool is to automatically exclude service statistics data on condoms from the EMU calculation. These data are excluded because there are several factors that impact the accuracy of capturing condom distribution as a FP method used. For example:

- Condoms are distributed for other uses besides FP, such as the prevention of HIV or other sexually transmitted infections.
- In some countries, the method of collecting the number of condoms distributed varies from other methods. For example, once a condom box is opened and left in the facility, the entire number of condoms in the box is counted as having been distributed.
- A condom distributed may not always guarantee that the condom is used. Because a condom is used by the client at the time of sex, outside a clinic setting, there is no way to ensure that every condom distributed is used. Clients may take more condoms than needed, they may expire before the client has an occasion to use them, etc.

Exclusion of condom data is the default setting because in most countries, condoms do not make up a significant enough share of the method mix to justify including these data. However, in countries where condoms do make up a significant proportion of the method mix, the user may change the default setting to include condom data. There are several graphs in the output tab that can help the user determine how including or excluding condom data will impact the results so that a final decision can be made. Graphs in the output tab show trends and growth rates with and without condoms, and graphs showing the scale of estimated users by method can help the user consider whether condom use is being reasonably estimated (compared with surveys) or whether condom use is being significantly overestimated, which is generally the concern. In most cases, the recommendation is to keep the default setting and to exclude condom data.

After Step 3, the user can move on to enter additional service statistics data types or continue to the final EMU output review.

### 3. Final Review of the EMU Output

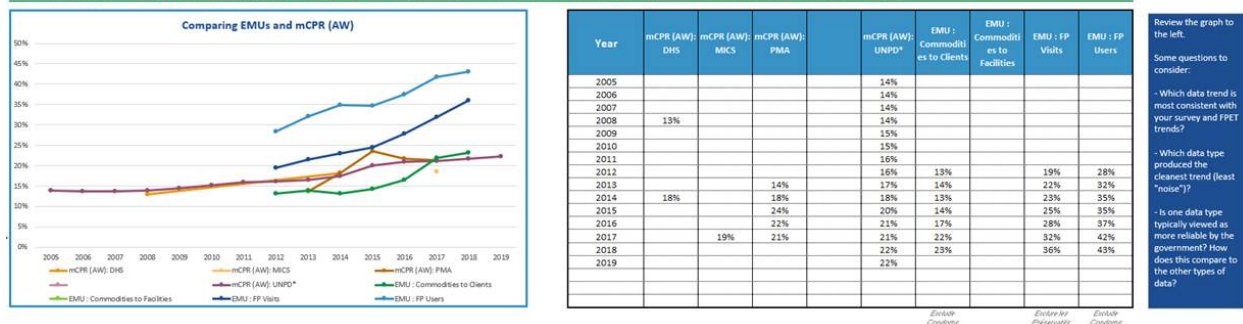
In the Final EMU output tab, the user can compare the results from the different types of service statistics data entered and assess which would best inform regular program monitoring and be appropriate as an FPET input. Many of the same graphs shown on the individual output tabs are displayed in the Final EMU output tab, but may be projected further out in time and integrated with other data types to provide a more complete picture.

**Step 1. Review the graphs.** For each graph, the user should consider whether the data look accurate enough to be used, and if so, which data type looks best? Some guiding questions for each graph include:

Comparing EMUs and mCPR:

- Which data trend is most consistent with your survey and FPET trends?
- Which data type produced the cleanest trend (least “noise”)?
- Is one data type typically viewed as more reliable by the government? Does this preferred data type have the cleanest trend? How does this compare to the other types of data?
- How does the annual average percentage point growth compare between the EMU and mCPR?
- Which data type's average annual growth is most consistent with the FPET and survey results?
- Do any data types have excessively high growth rates?

**Step 1 of 3: Review graphs below comparing EMU from Service Statistics considering questions in the blue boxes to the right**



Comparing Users by Method

- Which data type's method users are most consistent with survey results?
- Do any data types have inconsistent or unexpected distributions of users by method?

Comparing Reporting Rates

- Which data type's reporting rates are highest and most consistent over time?
- Do any data types have especially low or variable reporting rates?

**Step 2. Making your final decision on which service statistic EMU to use for program monitoring and as the FPET input.**

- Which data type had a trend up to the last survey most consistent with the FPET and surveys?
- Which data type has an annual growth rate most consistent with the FPET and surveys?
- Which data type has the highest and most consistent reporting rates?

- Which data type has a trend after the last survey that best reflects current efforts in FP? What, if anything, has changed in the FP program following the last survey?

Results: Trends in Users by Method. The graphic will show the trends in users by method based on the data source you selected. Use the drop-down menu to select different method types.

## HOW TO USE THE RDQA TOOL FOR SITE-LEVEL DATA QUALITY ASSESSMENT: DATA VERIFICATION

### Selecting the Indicators/Data Elements

With the integrated approach, as described above, the SS to EMU tool is used to review FP indicators, and identify indicator trends that show inconsistencies and the regions that indicate the most data quality challenges, before applying the RDQA tool. This process helps determine which indicators (or data elements) to target and which regions to select for the RDQA. The exact number of subnational units (e.g., regions and districts) and facilities that are selected depends on the resources and funding available; however, assessors have an option of either drawing a sample of facilities from selected regions and districts or, if funding is not an issue, conducting a more extensive assessment with a large or complete sample.

Once the FP data elements that will be assessed, and the geographic coverage of the RDQA in terms of the regions, districts, and facilities that will be visited are determined, the third variable to be decided is the time period for which the data will be assessed. For example, if data are reported every six months, the period of review for the RDQA could be the past six-month reporting period. (Appendix B)

### Selecting the Health System Data Management Levels

Many countries use a web-based HMIS data management system, such as the DHIS2, for inputting and storing health facility-level data. Data are typically entered at the district level and, increasingly, at the health facility level. The data management levels at which the RDQA will be administered is based on the level at which data are entered into the web-based system:

- Health facility sites compile monthly aggregate reports and send them to the district health office where the aggregate facility reports are entered into the web-based data management system. In this scenario, the data flow and quality verification will include only the district and health facility levels.
- Health facility sites compile monthly aggregate reports and enter the data directly into the web-based data management system at the health facility level. In this scenario, data quality verification will take place only at the health facility level.
- Health facility sites compile monthly aggregate reports and send them to the district health office. The district office then produces an aggregate district report, containing data from all health facilities in the catchment area, which are entered into a standalone electronic system. The district sends the district aggregate report to the next level of the health system (i.e., region) through email or other modality. Reports are aggregated at the regional level and then sent to the national level. In this scenario, data quality verification will take place at the health facility, district, regional, and national levels.

### Sampling Sites

A typical RDQA application calls for random sampling to select a representative sample of sites (i.e., health facilities and districts) whose data are indicative of data quality issues for the entire program. (Appendix C)

provides instructions on how to sample sites using two-stage cluster sampling.) However, the integrated approach allows the FP program to use the SS to EMU process to target the RDQA based on what the SS to EMU tool application reveals about the subnational levels and FP methods with the greatest need for onsite review.

## Site Data Quality Verification

At each site, you will need to collect data using the RDQA tool. If you have a team that is visiting multiple sites simultaneously, you can use multiple workbooks to collect data simultaneously and compile the data in one workbook when the site visits are completed.

### A) Setting Up Your Workbook

Using the drop down lists on the START page of the RDQA workbook, select the appropriate number of regional, district, and service delivery sites (i.e., health facilities) for onsite review.



Number of Regional Aggregation Sites	4	▼
Number of District Aggregation Sites	8	▼
Number of Service Delivery Sites	24	▼

The appropriate number of worksheets will automatically appear in the RDQA workbook (up to four regions, eight districts, and 24 service delivery sites).

### B) Data Collection Forms

The main “data collection” sheets of the RDQA tool are the service delivery site, district and regional aggregation sites, and national M&E unit sheets. Each sheet contains two parts for data collection: (1) data verifications and (2) system assessment.

When you are conducting an RDQA, you may be completing the full tool OR only the data verifications, if the tool is being used for routine monitoring of data quality.

### C) Data Verifications at Service Delivery Sites

At the service delivery level, Part 1: Data Verification of the RDQA Excel protocol has three sub-parts:

- Documentation Review
- Recounting Reported Results
- Cross-check Reported Results with Other Data Sources

## Documentation Review

For each indicator selected for the RDQA, review the availability and completeness of indicator source documents for the selected reporting period. Select “Yes” (available and complete) or “No” (not available and/or complete) for each indicator, following the data collection form.

When data are not available and/or incomplete, note in the comments what was unavailable or incomplete in the cells at the right of the form (not pictured here).

Component of the M&E System		Data Verifications				REVIEWER COMMENTS (Please provide detail for each response not coded “Yes - Completely”. Detailed responses will help guide strengthening measures. )
<b>Part 1: Data Verifications</b>						
<b>A - Documentation Review:</b>						
	<i>Review availability and completeness of all indicator source documents for the selected reporting period.</i>	Indicator 1	Indicator 2	Indicator 3	Indicator 4	COMMENTS
1	Review available data sources for the reporting period being verified. Are all necessary data sources available for review?	Yes	No	Yes	Yes	1) _____ 2) _____ 3) _____ 4) _____
	<i>If no, determine how this might have affected reported numbers.</i>					
2	Are all available data sources complete?	No	Yes	Yes	Yes	1) _____ 2) _____ 3) _____ 4) _____
	<i>If no, determine how this might have affected reported numbers.</i>					
3	Review the dates on the data sources. Do all dates fall within the reporting period?	Yes	Yes	No	Yes	1) _____ 2) _____ 3) _____ 4) _____
	<i>If no, determine how this might have affected reported numbers.</i>					

## Recounting Reported Results

For each indicator selected for the RDQA, recount results from source documents and compare the verified (i.e., recounted) numbers with the site reported numbers. Explain any discrepancies in the comments at right on the form (not pictured here).

<b>B - Recounting reported Results:</b>						
<i>Recount results from source documents, compare the verified numbers to the site reported numbers and explain discrepancies (if any).</i>						
4	Recount the number of people, cases or events during the reporting period by reviewing the data source. <b>[A]</b>	56	61	124	215	
5	Enter the number of people, cases or events reported by the site during the reporting period from the site summary report. <b>[B]</b>	59	58	132	209	
6	Calculate the ratio of recounted to reported results. <b>[A/B]</b>	95%	105%	94%	103%	
7	What are the reasons for the discrepancy (if any) observed (i.e., data entry errors, arithmetic errors, missing data source, other)?					1) no reported results; no verified results 2) _____ 3) _____ 4) _____

## Cross-Check Reported Results with Other Data Sources

When collecting your data at the service delivery site level, you will be asked to cross-check your results with other available data. This should include the following three cross-checks:

- Primary source to secondary source
- Secondary source to primary source (or a different primary to secondary source)
- Commodities management systems

Each of the three cross-checks can be captured on the data collection form for individual service delivery sites. Cross-checks can be performed by examining separate inventory records documenting the quantities of pills, injectables, IUDs, and condoms purchased and delivered during the reporting period to see whether these numbers corroborate the reported results.

You can include additional cross-checks at your discretion. For example, cross-checks could include randomly selecting 20 FP client dossiers and verifying whether these FP clients were recorded in the unit pharmacy register.

To the extent relevant, the cross-checks should be performed in both directions; for example, from FP client dossiers to the register and from the register to the client dossiers.

<b>C - Cross-check reported results with other data sources:</b>						
<i>Cross-checks can be performed by examining separate inventory records documenting the quantities of treatment drugs, test-kits or ITNs purchased and delivered during the reporting period to see if these numbers corroborate the reported results. Other cross-checks could include, for example, randomly selecting 20 patient cards and verifying if these patients were recorded in the unit, laboratory or pharmacy registers. To the extent relevant, the cross-checks should be performed in both directions (for example, from Patient Treatment Cards to the Register and from Register to Patient Treatment Cards).</i>						
<b>Cross-Check 1:</b> Verify the <b>primary source of data</b> against the <b>secondary source of data</b> . (If the cross-check conducted is different than the one that was planned, specify the cross-check performed in the cells to the right.)		Indicator 1	Indicator 2	Indicator 3	Indicator 4	1)
						2)
						3)
						4)
1.1	If feasible, select 5% of units being counted (or at least 20 units) in the secondary data source. How many units were selected?	18	23	45	67	
1.2	For how many units does the information for the indicator in the secondary data source match the information in the primary data source?	15	20	43	65	
1.3	<b>Calculate % difference for cross check 1:</b> If difference is below 90%, select an additional 5% of individual client records (or at least an extra 10 records) and redo the calculation (ADD the	83.3%	87.0%	95.6%	97.0%	1)
						2)
						3)

#### D) Data Verifications at the District/Regional Aggregation Sites and National M&E Unit

At the district and regional levels, and at the national M&E unit level, your focus is on the accuracy of the reporting. Your source documents for data verifications at these aggregation levels are the reports from the service delivery sites in that district, the reports from the districts in the region, and the reports from the regions to the National M&E Unit.

At the aggregation sites, Part 1: Data Verification of the RQDA Excel protocol has two sub-parts. Each part requires a review of the source documents. Percentage calculations for scores are done automatically by the tool.

#### Recounting Reported Results

Recount results from the routine (i.e., monthly) reports sent from service delivery sites to the district level and compare them with the aggregate value reported by the district. Explain any discrepancies.

<b>Part 1: Data Verifications</b>						
<b>A - Recounting reported Results:</b>						
<i>Recount results from the periodic reports sent from service sites to the District and compare to the value reported by the District. Explain discrepancies (if any).</i>		Indicator 1	Indicator 2	Indicator 3	Indicator 4	COMMENTS
1	Re-aggregate the numbers from the reports received from all Service Delivery Sites. What is the re-aggregated number? <b>[A]</b>	289	341	521	489	
2	What aggregated result was contained in the summary report prepared by the District (and submitted to the next reporting level)? <b>[B]</b>	282	338	524	488	
3	<b>Calculate the ratio of recounted to reported results. [A/B]</b>	<b>102%</b>	<b>101%</b>	<b>99%</b>	<b>100%</b>	
4	What are the reasons for the discrepancy (if any) observed (i.e., data entry errors, arithmetic errors, missing data source, other)?					1)
						2)
						3)
						4)



## Reporting Performance

Review the availability, completeness, and timeliness of reports from all service delivery sites. How many reports should there have been for the period of review? How many reports were available? Were they received on time? Were they complete?

<b>B - Reporting Performance:</b>			
<i>Review availability, completeness, and timeliness of reports from all Service Delivery Sites. How many reports should there have been from all Sites? How many are there? Were they received on time? Are they complete?</i>			
5	How many reports should there have been from all service delivery sites? <b>[A]</b>		38
6	How many reports are there? <b>[B]</b>		29
7	Calculate % <b>Available Reports [B/A]</b>		76%
8	Check the dates on the reports received. How many reports were received on time? (i.e., received by the due date). <b>[C]</b>		21
9	Calculate % <b>On time Reports [C/B]</b>		72%
10	How many reports were complete? (i.e., complete means that the report contained all the required indicator data, the date of reception of the report by the District, and the authentication by the responsible staff). <b>[D]</b>		23
11	Calculate % <b>Complete Reports [D/B]</b>		79%

## Data Quality Analysis

Once the data have been entered, the RDQA generates data visuals, such as graphs and summary tables, for review and interpretation.

Across the levels of the system, there are two key metrics you should know how to interpret and use as you analyze your results and use them to create action plans for system strengthening. These two metrics follow.

### Verification Factor

What it is: The verification factor (VF) is the key metric for assessing the accuracy of the reported data. It is derived by comparing the reported data to the source data (i.e., the data recorded in the register or other HMIS records at the service delivery point).

Scoring scale: Scale: +/- 100 percent

What the scores mean: Values < (less than) 100 percent: Signify overreporting, (i.e., recounted data from the primary source document are lower than the reported value).

- This means that the report says there were more services delivered than the source document shows.

100%: Perfect accuracy (exact match of recounted to reported).

Values > (greater than) 100 percent: Signify underreporting (i.e., recounted data from the primary source document are higher than the reported value).

- This means that the report says there were fewer services delivered than the source document shows.

Acceptable values: For the purposes of the RDQA, a VF between 90 percent and 110 percent is considered acceptable (within a 10% range of a perfect match). Some countries or programs can decide on 95 percent to 105 percent (within a 5% range of acceptability).

Where you will see it in the results: Dashboards for the individual sites and the summary dashboard will have a bar chart of the VFs for each indicator on the chart titled “Data Verifications.” Bars that fall outside the interval of 90 percent to 110 percent indicate that the site is over- or underreporting.

### Cross-Check Results

What it is: Cross-checks compare a subset of units in the source data to a secondary source. The value reported for the cross-check indicates the percentage of the source records you selected that were also reported in the comparison document.

Scoring scale: Scale: 0 percent to 100 percent

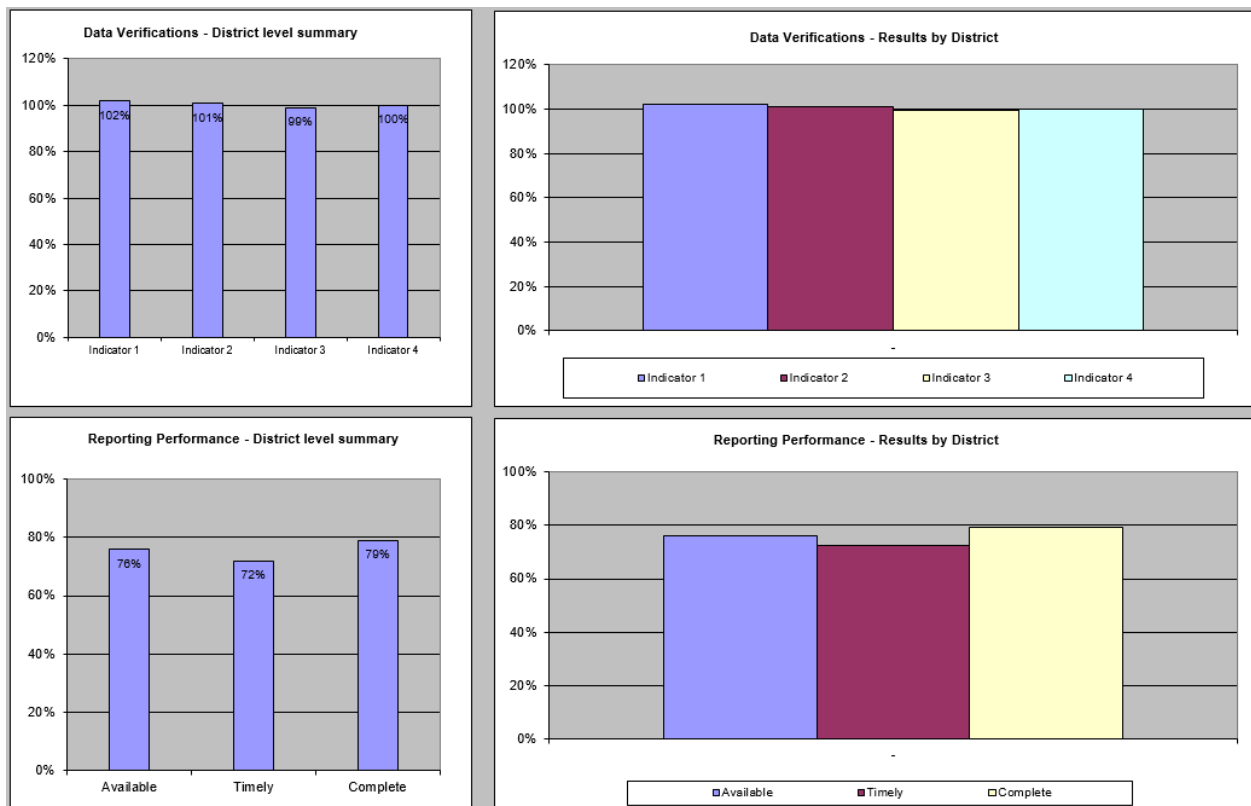
What the scores mean: The lower the value, the fewer the source records that also appeared in a second data source.

If you conduct the cross-checks with approximately 5 percent of your source records and the cross-check value is less than 90 percent (more than 1 in 10 records were missing in your secondary document), select another approximately 5 percent or 10 records (whichever is greater) to add to your sample.

Where you will see it in the results: The cross-checks are an additional means of assessing data quality at the service delivery point. They are included in the individual and aggregate dashboards for the service delivery sites.

### Results Display

The bar chart on the upper right shows the quantitative data generated from the data verifications; they can be used to plan for data quality improvement.



## Summary Tables

To simplify the process of reviewing feedback from various sites or at various levels, the latest version of the RDQA tool has been updated to include worksheets with tables that automatically populate with the comments and remarks about the responses to the RDQA questions.

Data verification results are summarized in the Quantitative Comments for the Regional, District, and Facility level sheets. Here you can view the results of the Documentation Review, Recounting Reported Results, the three Cross-Checks, and Reporting Performance. Each row provides data for one service delivery site or district/region (depending on which sheet you are reviewing).

The Service Site # corresponds with the worksheet where the data was captured

The Unit Name gives the actual name of the service site / district.

Results are automatically drawn from the data collection worksheets

Headers indicate the section of the data verifications

Service Site	Service Site	B - Recounting reported Results:									
	Unit Name	Recount the number of people, cases or events during the reporting period by reviewing the data source. [A]				Enter the number of people, cases or events reported by the site during the reporting period from the site summary report. [B]					
		What are the reasons for the discrepancy (if any) observed? <small>(data source)</small>				Calculate the ratio of recount					
Service Site	Unit Name					Number Counseled and tested				Number testing positive	
Service Delivery Site 1	CS Parakou	1) 100 2) 75 3) 30 4) 10	0%		1) 90 2) 85 3) 25 4) 8	0%	110%	no reported results; no verified results		115%	0
Service Delivery Site 2	Maternite de bonne saveur Parakou	1) 140 2) 45 3) 20 4) 90	0		1) 80 2) 55 3) 25 4) 70	0	175%	no reported results; no verified results		82%	0
Service Delivery Site 3	CS Immacule Conception de Kalale	1) 100 2) 90 3) 60 4) 15	0		1) 120 2) 40 3) 40 4) 10	0	83%	no reported results; no verified results		225%	0
Service Delivery Site 4	Hopital St. L'Yess de Kalale	1) 180 2) 150 3) 101 4) 23	0		1) 195 2) 145 3) 92 4) 21	0	92%	no reported results; no verified results		103%	0
Service Delivery Site 5	Hopital Regionale de Savalou	1) 210 2) 180 3) 80 4) 31	0		1) 270 2) 150 3) 90 4) 19	0	78%	no reported results; no verified results		120%	0

## CONCLUSION

The integrated approach to data quality will allow users to identify indicators that have data quality issues with the use of the SS to EMU tool during a desk review meeting. The indicators with data quality issues will require further investigations and thus the RDQA data verification components will help to assess the data accuracy, report completeness, and timeliness.

## REFERENCES

MEASURE Evaluation. (2017). *Routine data quality assessment tool - User manual*. Chapel Hill, NC: MEASURE Evaluation, University of North Carolina. Retrieved from <https://www.measureevaluation.org/resources/publications/ms-17-117>.

MEASURE Evaluation. (2017). RDQA tool. <https://www.measureevaluation.org/resources/tools/data-quality>.

MEASURE Evaluation. (2018). RDQA +G tool. [Gender-Integrated Routine Data Quality Assessment \(RDQA+G\) Tool – DataForImpactProject \(data4impactproject.org\)](http://data4impactproject.org)

Track 20. (n.d.) SS to EMU tool. Retrieved from [http://www.track20.org/pages/track20\\_tools/SS\\_to\\_EMU\\_tool.php](http://www.track20.org/pages/track20_tools/SS_to_EMU_tool.php).

## Set Up : Language and Country Information

1

Select the Language

English

*Select from the dropdown list*

2

Select the Country

*Select from the dropdown list*

3

Are you using national or subnational data?

National

4

Does your family planning data include all women or only married women?

*Select "All Women" unless your family planning program exclusively serves married women.*

5

What is the most recent year for which you have complete service statistics data?

## Set up: Enter Background Data - Population and Prevalence

<i>Review data and add any missing surveys or data points:</i>		DHS		MICS		PMA				UNPD*	
	<b>Population: Married Women of Reproductive Age</b>	<i>mCPR (MW): DHS</i>	<i>mCPR (AW): DHS</i>	<i>mCPR (MW): MICS</i>	<i>mCPR (AW): MICS</i>	<i>mCPR (MW): PMA</i>	<i>mCPR (AW): PMA</i>			<i>mCPR (MW): UNPD*</i>	<i>mCPR (AW): UNPD*</i>
2005	#N/A										

<b>Source for pop, if changed:</b>	
------------------------------------	--

\* UNPD estimates are sourced from Estimates and Projections of Family Planning Indicators 2020.

Note - If unedited, population data are sourced from UNPD's World Population Prospects 2019

## Set up: Select the types of service statistics data you have available and enter information about those data

### Contraceptive Commodities

#### Contraceptive commodities distributed to clients

Do you have data on contraceptive commodities?

Source:

First year of data available:

Most recent full year of data available:

What sectors are reporting?


*(HMIS, DHIS2, LMIS)*

*select from the dropdown list*

#### Contraceptive commodities distributed to facilities

Do you have data on contraceptive commodities?

Source:

First year of data available:

Most recent full year of data available:

What sectors are reporting?


*(HMIS, DHIS2, LMIS)*

*select from the dropdown list*

## FP Visits and Users

### FP Visits

Do you have data on FP visits?

Source:

First year of data available:

Most recent full year of data available:

What sectors are reporting?

(HMIS,  
DHIS2,  
LMIS)

*select from  
the  
dropdown  
list*

### FP Users

Do you have data on FP users?

Source:

First year of data available:

Most recent full year of data available:

What sectors are reporting?

(HMIS,  
DHIS2,  
LMIS)

*select from the  
dropdown list*

## Long-Acting Methods: Introduced or Scaled Up?

**NOTE below any methods INTRODUCED/SCALED UP in the FIRST YEAR of data available for each data type and method.**

To more accurately estimate users of long-acting methods, you need to account for women who received their method before the first year of data available. To help estimate the number of users of long-acting methods who received their method before the first year of data, please note below any methods that were newly introduced or undergoing substantial scale-up in the FIRST YEAR of data available, by data type and method. If methods were NOT newly introduced or scaling up in the first year of data, leave the cells BLANK.

<b>Contraceptive commodities distributed to clients</b>	<b>Contraceptive commodities distributed to facilities</b>	<b>FP Visits</b>
---	--	------------------



	<i>First year of data available:</i>	N/A	N/A	N/A
<b>Sterilization</b>	Tubal Ligation (F)			
	Vasectomy (M)			
<b>IUD</b>	Copper- T 380-A IUD			
	LNG-IUS			
<b>Implant</b>	Implanon			
	Jadelle			
	Sino-Implant			

## Sources of Contraceptives

List the primary sources of contraceptives in your country. Then enter the sector of each source and select whether that source is represented in your data.

Below please enter all the sources/providers that people use to access contraceptives in your country (e.g., public hospitals, public clinics, community health centers, private doctors, private pharmacies). Then enter the sector of that source (public, private, other) and indicate whether that source reports to your data system or is represented in the data you have to analyze.

Source	Sector	Included in your data?			
		Contraceptive commodities distributed to clients	Contraceptive commodities distributed to facilities	FP Visits	FP Users
<i>(e.g., community health center)</i>	<i>(e.g., public or private)</i>	<i>Yes? No? Partially?</i>			

**Country :** 0

**Source :** No DHS available - replace with your own data, if available

## Step 1 of 3

Method		Public Sector <i>Government Health Facilities and Home/Community Delivery</i>	Private Medical Sector			Other Source	
			<i>NGO</i>	<i>Private Hospital/Clinic Delivery</i>	<i>Pharmacy</i>	<i>Shop/Church/Friend</i>	<i>Other</i>
Long-Acting and Permanent Methods	Sterilization (F)						
	Sterilization (M)						
	IUD						
	Implant						
Short-Term Methods	Injectable						
	Pill						
	Condom (M)						
	Condom (F)						
	Other Modern Methods						
	Emergency contraception						

## Step 2 of 3: What sectors are reporting in your data?

Based on what you entered on the previous sheet, in your summary of FP Sources, review the table below and select from the dropdown menu to indicate which sectors are included in the service statistics data you have on hand.

Data Type	Sectors Reporting	Public Sector	Private Medical Sector			Other Source	
		<i>Government Health Facilities and Home/Community Delivery</i>	<i>NGO</i>	<i>Private Hospital/ Clinic Delivery</i>	<i>Pharmacy</i>	<i>Shop/ Church/ Friend</i>	<i>Other</i>
Contraceptive commodities distributed to clients	N/A						
Contraceptive commodities distributed to facilities	N/A						
FP Visits	N/A						
FP Users	N/A						

## Step 3 of 3: Review Your Adjustment Factor

In the table below, for each type of data available, the value represents the adjustment factor that will be multiplied by your FP Commodity/Visits/Users data to inflate the values to represent the full market (ALL public and private FP provision).

If the value in the table is 1.00, then it is assumed that your data represent ALL of that FP method provided in the country (based on the data from the DHS and your answers above).

If the value in the table is greater than 1.00, it is assumed that your data DOES NOT represent all of that type of commodity/service provided in the country. Your data will be multiplied by that value to estimate the total number of that FP method provided in both the public and private sectors in the country.

	Method	Contraceptive commodities distributed to clients	Contraceptive commodities distributed to facilities	FP Visits	FP Users
<b>Long-Acting and Permanent Methods</b>	Sterilization (F)	n/a	n/a	n/a	n/a
	Sterilization (M)	n/a	n/a	n/a	n/a
	IUD	n/a	n/a	n/a	n/a
	Implant	n/a	n/a	n/a	n/a
<b>Short-Term Methods</b>	Injectable	n/a	n/a	n/a	n/a
	Pill	n/a	n/a	n/a	n/a
	Condom (M)	n/a	n/a	n/a	n/a
	Condom (F)	n/a	n/a	n/a	n/a
	Other Modern Methods	n/a	n/a	n/a	n/a
	Emergency Contraception	n/a	n/a	n/a	n/a

\* You may choose to adjust condom data to account for private sector provision; however, it is recommended to leave the condom values unadjusted to avoid overestimating condom use. Selecting "adjusted" from the dropdown list to the right will adjust your condom estimates to account for the private sector.

You are inflating by a factor of 2 or more to account for the private sector.

You are inflating by a factor of 10 or more to account for the private sector

# Set Up : Contraceptive Method Mix

0 : National

Data on the mix of modern contraceptive methods will be pre-populated from the latest survey available since the 2018 FP2020 report. If a more recent survey is available, you can select "yes" in step 2, then enter the prevalence, by method, in the yellow cells on the right. The modern method mix will be calculated in the left-hand column and shown in the graph.

1

Most recent source of national method mix preloaded is

#N/A

2

Is there a better or more recent source you would like to use?

No

3

Source & Year	
Population	
Sterilization (female)	
Sterilization (male)	
IUD	
Implant	
Injectable	
OC Pills	
Condom (m+f)	
LAM	
Other Modern Methods	
Methods must sum to 100%	

Modern Contraceptive Method Mix	N/A
#N/A	
#N/A	

# Input: Contraceptive Commodities Distributed to Clients

0 : National

## STEP 1 of 3. ENTER REPORTING RATES FOR THE REPORTING FORM USED FOR THIS TYPE OF DATA

Enter the reporting rates for the form used to report this type of FP data for each year of data you have available. Review whether reporting rates are high enough and consistent enough to use the data.

	COMPLETE REPORTING RATES														
	0														
Reporting Rates															

**Reporting rates should be above 80% to use data in the FPET. If rates are between 60% and 80%, please discuss with a Track20 Team Member.**

## STEP 2 of 3. ENTER COMMODITIES DATA

Enter the annual commodities figures by method in the table below for whichever methods are used in your country. Enter data for each year.

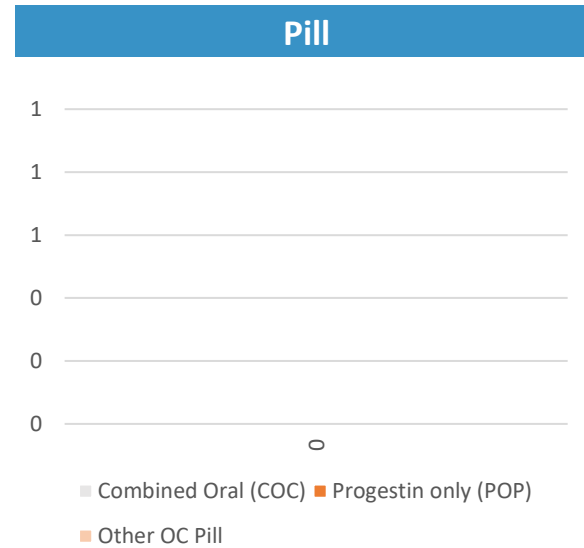
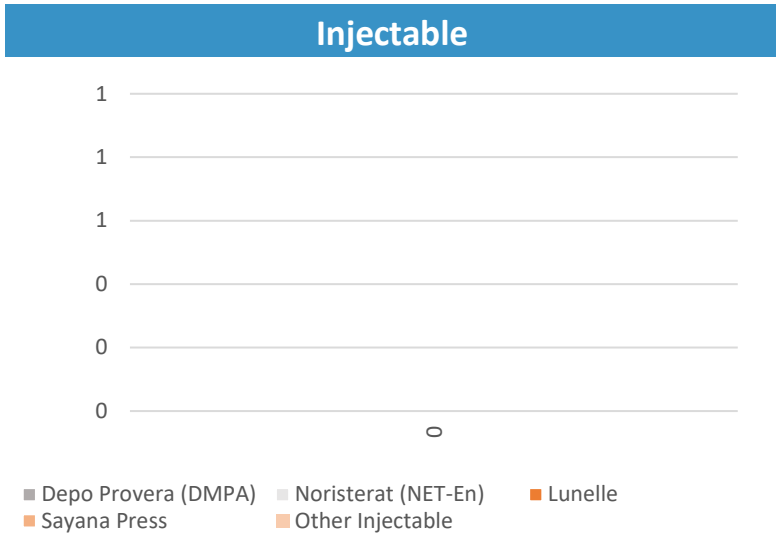
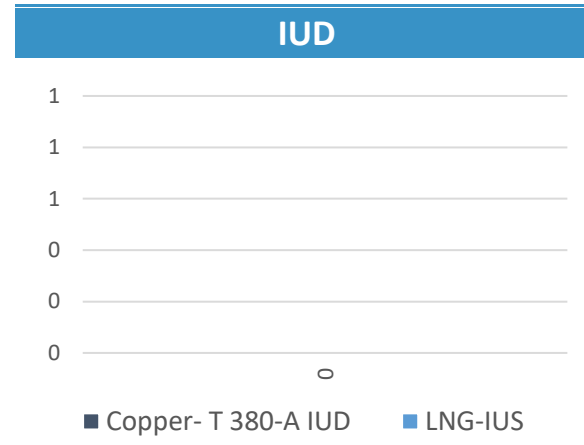
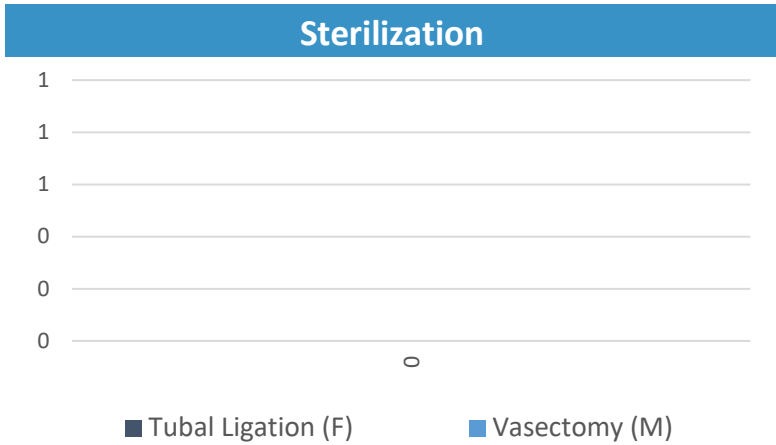
METHOD	CYP FACTOR	UNITS	Contraceptive commodities distributed to clients															
			0															
<b>Long-Acting and Permanent Methods</b>																		
<b>Sterilization</b>	Tubal Ligation (F)	10	years of protection															
	Vasectomy (M)	10	years of protection															
<b>IUD</b>	Copper-T 380-A IUD	4.6	years of protection															
	LNG-IUS	3.3	years of protection															
<b>Implant</b>	Implanon	2.5	years of protection															
	Jadelle	3.8	years of protection															
	Sino-Implant	3.2	years of protection															
<b>Short-Term Methods</b>																		
<b>Injec-table</b>	Depo Provera (DMPA)	4	per user per year															
	Noristerat (NET-En)	6	per user per year															
	Lunelle	13	per user per year															



	Sayana Press	4	per user per year																
	Other Injectable	4	per user per year																
<b>Pill</b>	Combined Oral (COC)	15	per user per year																
	Progestin only (POP)	15	per user per year																
	Other OC Pill	15	per user per year																
<b>Condom</b>	Male Condom	120	per user per year																
	Female Condom	120	per user per year																
<b>Other Modern Methods</b>	LAM	4	per user per year																
	SDM (Standard Days)	1.5	years of protection																
	Vaginal barrier	1	per user per year																
	Spermicides	120	per user per year																
<b>Emergency Contraception</b>	EC	20	per user per year																
<b>Total CYPs</b>																			

## STEP 3 of 3: REVIEW YOUR DATA

Review the graphs below showing the data you entered above. Keep an eye out for any anomalies that might indicate errors. Once you have validated the data, click the arrow to take you to review your outputs.



## Input: FP Visits

### 0 : National

#### STEP 1 of 3. ENTER REPORTING RATES FOR THE REPORTING FORM USED FOR THIS TYPE OF DATA

Enter the reporting rates for the form used to report this type of FP data for each year of data you have available. Review whether reporting rates are high enough and consistent enough to use the data.

	0																		
<b>Reporting Rates</b>																			

**Reporting rates should be above 80% to use data in the FPET. If rates are between 60% and 80%, please discuss with a Track20 Team Member.**

#### STEP 2 of 3. ENTER VISITS DATA

Enter the annual FP visits figures by method in the table below for whichever methods are used in your country. Enter data for each year.

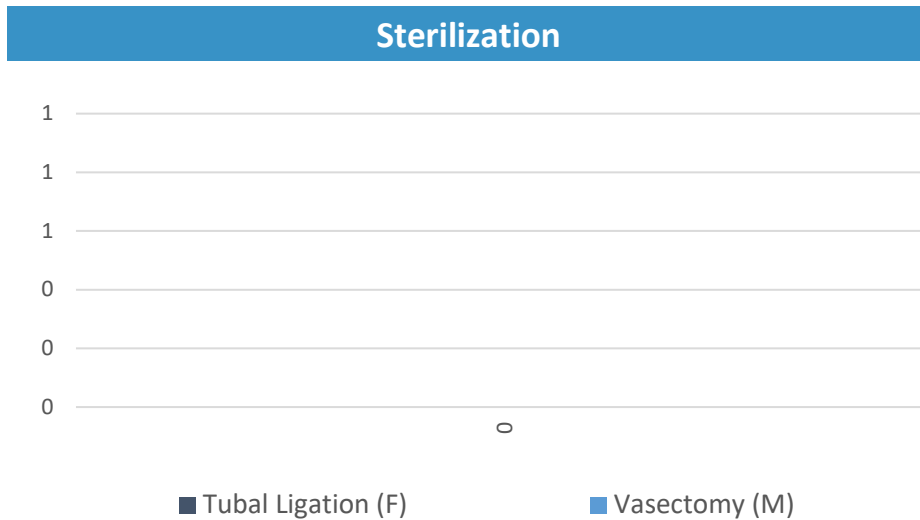
FP Visits																			
METHOD	CYP FACTOR	UNITS	0																
<b>Long-Acting and Permanent Methods</b>																			

<b>Sterilization</b>	Tubal Ligation (F)	10	years of protection																	
	Vasectomy (M)	10	years of protection																	
<b>IUD</b>	Copper- T 380-A IUD	4.6	years of protection																	
	LNG-IUS	3.3	years of protection																	
<b>Implant</b>	Implanon	2.5	years of protection																	
	Jadelle	3.8	years of protection																	
	Sino-Implant	3.2	years of protection																	
<b>Short-Term Methods</b>																				
<b>Injectable</b>	Depo Provera (DMPA)	4	visits per year																	
	Noristerat (NET-En)	6	visits per year																	
	Lunelle	13	visits per year																	
	Sayana Press	4	visits per year																	
	Other Injectable	4	visits per year																	
<b>Pill</b>	Combined Oral (COC)	4	visits per year																	
	Progestin only (POP)	4	visits per year																	
	Other OC Pill	4	visits per year																	
<b>Condom</b>	Male Condom	12	visits per year																	

	Female Condom	12	visits per year																
<b>Other Modern Methods</b>	LAM	4	consultation per user																
	SDM (Standard Days)	1	consultation per user																
	Vaginal barrier	1	years of protection																
	Spermicides	12	visits per year																
	<b>Emergency Contraception</b>	EC	12	visits per year															
<b>Total CYPs</b>				<b>0</b>															

### STEP 3 of 3: REVIEW YOUR DATA

Review the graphs below showing the data you entered above. Keep an eye out for any anomalies that might indicate errors. Once you have validated the data, click the arrow to take you to review your outputs.



## Input: FP Users

### 0 : National

#### STEP 1 of 3. ENTER REPORTING RATES FOR THE REPORTING FORM USED FOR THIS TYPE OF DATA

Enter the reporting rates for the form used to report this type of FP data for each year of data you have available. Review whether reporting rates are high enough and consistent enough to use the data.

	0																		
<b>Reporting Rates</b>																			

**Reporting rates should be above 80% to use data in the FPET. If rates are between 60% and 80%, please discuss with a Track20 Team Member.**

#### STEP 2 of 3. ENTER USERS DATA

Enter the annual FP visits figures by method in the table below for whichever methods are used in your country. Enter data for each year.

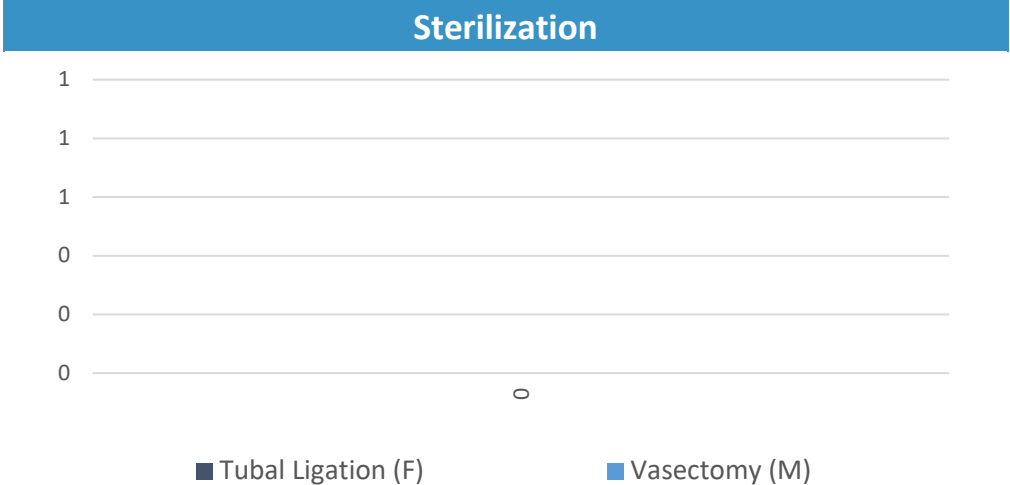
FP Visits																			
METHOD	CYP FACTOR	UNITS	0																
<b>Long-Acting and Permanent Methods</b>																			

<b>Sterilization</b>	Tubal Ligation (F)	10	years of protection																
	Vasectomy (M)	10	years of protection																
<b>IUD</b>	Copper- T 380-A IUD	4.6	years of protection																
	LNG-IUS	3.3	years of protection																
<b>Implant</b>	Implanon	2.5	years of protection																
	Jadelle	3.8	years of protection																
	Sino-Implant	3.2	years of protection																
<b>Short-Term Methods</b>																			
<b>Injectable</b>	Depo Provera (DMPA)	4	visits per year																
	Noristerat (NET-En)	6	visits per year																
	Lunelle	13	visits per year																
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<b>Pill</b>	Combined Oral (COC)	4	visits per year																
	Progestin only (POP)	4	visits per year																
	Other OC Pill	4	visits per year																
<b>Condom</b>	Male Condom	12	visits per year																

	Female Condom	12	visits per year																
<b>Other Modern Methods</b>	LAM	4	consultation per user																
	SDM (Standard Days)	1	consultation per user																
	Vaginal barrier	1	years of protection																
	Spermicides	12	visits per year																
	<b>Emergency Contraception</b> EC	12	visits per year																
<b>Total CYPs</b>				<b>0</b>															

### STEP 3 of 3: REVIEW YOUR DATA

Review the graphs below showing the data you entered above. Keep an eye out for any anomalies that might indicate errors. Once you have validated the data, click the arrow to take you to review your outputs.





APPENDIX B. RDQA DATA VERIFICATION

Data Verification and System Assessment Sheet - Service Delivery Point		
<b>Service Delivery Point/Organization:</b>	-	
<b>Region and District:</b>	-	
<b>Indicator Reviewed:</b>	-	
<b>Date of Review:</b>	-	
<b>Reporting Period Verified:</b>	-	
<b>Component of the M&amp;E System</b>	<b>Answer Codes:</b> Yes - completely Partly No - not at all N/A	<b>REVIEWER COMMENTS</b> (Please provide detail for each response not coded "Yes – Completely." Detailed responses will help guide strengthening measures.)
<b>Part 1: Data Verifications</b>		
<b>A - Documentation Review:</b>		
	<i>Review availability and completeness of all indicator source documents for the selected reporting period.</i>	
1	Review available source documents for the reporting period being verified. Is there any indication that source documents are missing?	

	If <u>yes</u> , determine how this might have affected reported numbers.		
2	Are all available source documents complete?		
	If <u>no</u> , determine how this might have affected reported numbers.		
3	Review the dates on the source documents. Do all dates fall within the reporting period?		
	If <u>no</u> , determine how this might have affected reported numbers.		
<b>B - Recounting Reported Results:</b>			
	<i>Recount results from source documents, compare the verified numbers with the site reported numbers and explain discrepancies (if any).</i>		
4	<u>Recount</u> the number of people, cases, or events during the reporting period by reviewing the <i>source documents</i> . <b>[A]</b>		
5	Enter the number of people, cases, or events <u>reported</u> by the site during the reporting period from the site <i>summary report</i> . <b>[B]</b>		
6	<b>Calculate the ratio of recounted to reported numbers. [A/B]</b>	-	
7	What are the reasons for the discrepancy (if any) observed (i.e., data entry errors, arithmetic errors, missing source documents, other)?		
<b>C - Cross-Check Reported Results with Other Data Sources:</b>			

*Cross-checks can be performed by examining separate inventory records documenting the quantities of family planning commodities and contraceptives purchased and delivered during the reporting period to see if these numbers corroborate the reported results. Other cross-checks could include, for example, randomly selecting 20 patient cards and verifying if these patients were recorded in the unit, laboratory, or pharmacy registers. To the extent relevant, the cross-checks should be performed in both directions (for example, from Patient Treatment Cards to the Register and from Register to Patient Treatment Cards).*

8	List the documents used for performing the cross-checks.		
9	Describe the cross-checks performed?		
10	What are the reasons for the discrepancy (if any) observed?		

## Data Verification and System Assessment Sheet – District - Regional Site

<b>Regional Site/Organization:</b>	-
<b>Region:</b>	-
<b>Indicator Reviewed:</b>	-
<b>Date of Review:</b>	-
<b>Reporting Period Verified:</b>	-

Component of the M&E System		Answer Codes: Yes - completely Partly No - not at all N/A	REVIEWER COMMENTS
<b>Part 1: Data Verifications</b>			
<b>A - Recounting Reported Results:</b>			
<i>Recount results from the periodic reports sent from the districts to the region and compare with the value reported by the region. Explain discrepancies (if any).</i>			
1	Reaggregate the numbers from the reports received from all service delivery points. What is the reaggregated number? <b>[A]</b>		
2	What aggregated result was contained in the summary report prepared by the intermediate aggregation site (and submitted to the next reporting level)? <b>[B]</b>		
3	<b>Calculate the ratio of recounted to reported numbers. [A/B]</b>	-	
4	What are the reasons for the discrepancy (if any) observed (i.e., data entry errors, arithmetic errors, missing source documents, other)?		
<b>B - Reporting Performance:</b>			

<i>Review availability, completeness, and timeliness of reports from all districts in the region. How many reports should there have been from all districts? How many are there? Were they received on time? Are they complete?</i>			
5	How many reports should there have been from all districts? <b>[A]</b>		
6	How many reports are there? <b>[B]</b>		
7	Calculate % <b><u>Available</u> Reports [B/A]</b>	-	
8	Check the dates on the reports received. How many reports were received on time? (i.e., received by the due date). <b>[C]</b>		
9	Calculate % <b><u>On Time</u> Reports [C/A]</b>	-	
10	How many reports were complete? (i.e., complete means that the report contained all the required indicator data*). <b>[D]</b>		
11	Calculate % <b><u>Complete</u> Reports [D/A]</b>	-	

## APPENDIX C. INSTRUCTIONS FOR SAMPLING SITES USING TWO-STAGE CLUSTER SAMPLING

1. Determine the number of clusters and sites: The assessment team should work with relevant stakeholders (National FP Program, MOH, Strategic Information (SI) Team, National M&E Unit, etc.) to determine the number of clusters and sites within clusters. The appropriate number of sites and clusters depends on the objectives of the assessment; precise estimates of data quality require a large number of clusters and sites. It is often not necessary to have a statistically robust estimate of accuracy. That is, it is sufficient to have a reasonable estimate of the accuracy of reporting to direct system strengthening measures and build capacity. A reasonable estimate requires far fewer sites and is more practical in terms of resource use. Generally, 12 sites sampled from within four clusters (three sites each) are sufficient to gain an understanding of the quality of the data and the corrective measures required.
2. More than one intermediate level: In the event there is more than one intermediate aggregation level (i.e., the data flow from district to region before going to the national level), a three-stage cluster sample should be drawn. That is, two regions should be sampled and then two districts sampled from each region (four total districts).
3. No intermediate level: If the data are reported directly from the service delivery point to the national level (i.e., there is no intermediate aggregation site), the site selection will be conducted as above (cluster sampling with the district as the primary sampling unit), but the data will not be reviewed for the intermediate level and results from service delivery sites will be aggregated to derive the national total.
4. Prepare the sampling frame: The first step in the selection of clusters for the assessment will be to prepare a sampling frame, or a listing of all districts (or clusters) where the activity is being conducted (e.g., districts with FP sites). The methodology calls for selecting clusters proportionate to size, (i.e., the volume of service). It is often helpful to expand the sampling frame so that each cluster is listed proportionate to the size of the program in the cluster. For example, if a given cluster is responsible for 15 percent of the clients served, that cluster should comprise 15 percent of the elements in the sampling frame. Be careful not to order the sampling frame in a way that will bias the selection of the clusters. Ordering the clusters can introduce periodicity (e.g., every third district is rural). Ordering alphabetically is generally a harmless way of ordering the clusters.
5. Calculate the sampling interval: The sampling interval is obtained by dividing the number of elements in the sampling frame by the number of elements to be sampled. Using a random number table or similar method, randomly choose a starting point on the sampling frame. This is the first sampled district. Then proceed through the sampling frame selecting districts that coincide with multiples of the sample interval. The starting number + sampling interval = second cluster. The starting number + 2 (sampling interval) = third cluster, etc.
6. Stratify the service delivery points: Order the service delivery points in each of the sampled districts by the volume of service, (i.e., the value of the indicator for the reporting period being assessed). Divide the list into strata according to the number of sites to be selected. If possible, select an equal number of sites from each stratum. For example, if you are selecting three sites, create three strata (small, medium, and large). If you are selecting two sites, create two strata. For six sites, create three strata and select two sites per stratum, and so on. Divide the range (subtract the smallest value from the largest) by the number of strata to establish the cut points of the strata. If the sites are not equally distributed among the strata, use your judgment to assign sites to strata.
7. Select the service delivery points: For a large number of sites per district, you can use a random number table and select sites systematically, as above. For a small number of sites, simple random sampling can be used to select sites within clusters.
8. Select “back-up” sites: If possible, select a back-up site for each stratum. Use this site only if you are unable to visit the originally selected sites due to security concerns or other factors. Start over with a fresh sampling frame

to select this site (excluding the sites already selected). Do not replace sites based on convenience. The replacement of sites should be discussed with the relevant stakeholders.

9. Know your sampling methodology: The sites are intended to be selected for the assessment as randomly (and equitably) as possible while benefiting from the convenience and economy associated with cluster sampling. You may be asked to explain why a given site has been selected. Be prepared to describe the sampling methods and explain the equitable selection of sites.



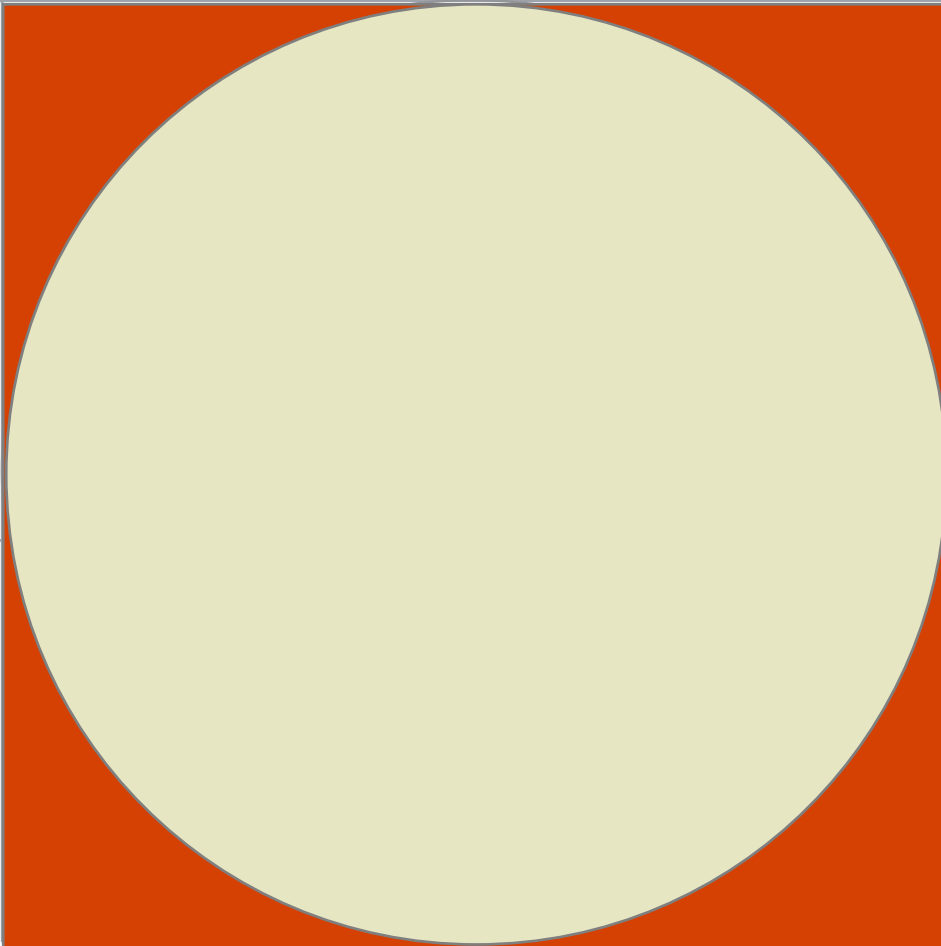


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