



الهيئة العامة للإحصاء  
General Authority for Statistics

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## منهجية نشرة إحصاءات العمرة

## Methodology of Umrah Statistics Bulletin

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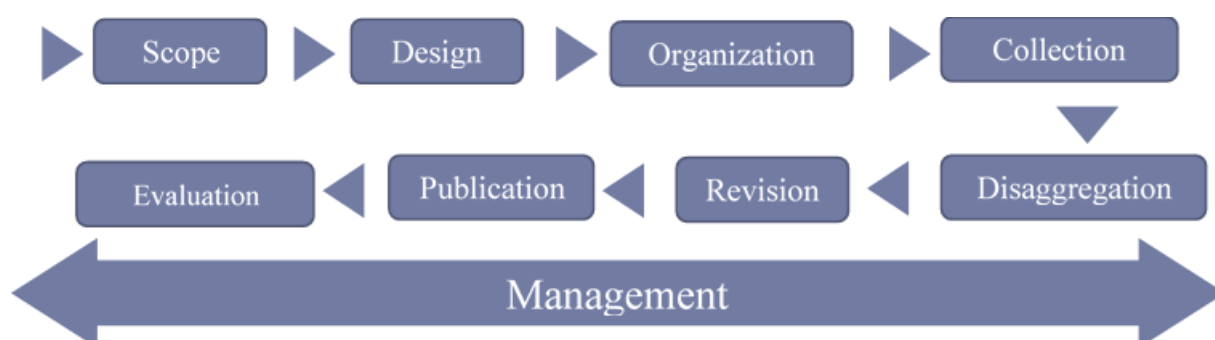
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## Introduction

As part of GASTAT mission which is represented in providing comprehensive, reliable, up-to-date statistics and value-added services in line with international standards and taking the lead in developing a modern statistical sector in order to support decision making, and in order to achieve GASTAT vision which is represented in being a world-class, innovative statistical reference for Saudi Arabia's socio-economic development, GASTAT developed all its statistical works' methodologies to be harmonized with the work stages stated in GASTAT's Manual of Statistical Work Procedures which conforms with the approved work procedures of international organizations that are concerned with developing the statistical methodologies.

Each of GASTAT's statistical products goes through eight major stages, in addition to a ninth stage having to do with the comprehensive "management", as illustrated in the following figure.



**Umrah Statistics Bulletin** is one of GASTAT products. Its methodology has been developed according to these stages, which can be explained with further details as follows:

### First stage: The scope

During this stage, statistical needs are understood and confirmed, and potential solutions are determined. GASTAT has contacted and held meetings with its partners from the related governmental entities in Saudi Arabia represented in:

- Ministry of Interior
- The General Presidency for the affairs of the Grand Mosque and the Prophet's Mosque
- Ministry of Hajj and Umrah

- The Custodian of the Two Holy Mosques Institute of Hajj and Umrah Research

In order to identify the nature of statistics that can be provided by these entities and determine GASTAT needs from them, in addition to taking their feedback into consideration to achieve the objectives of this bulletin that can be summarized as:

- Building a database on Internal and External Umrah Performers which would help achieve the Kingdom's 2030 Vision.
- Gain insight into the total annual number of external Umrah performers.
- Help concerned agencies identify the needed manpower and facilities to serve Umrah performers, ensure their safety and comfort.
- Meet the Kingdom's key data requirements on internal Umrah performers' numbers and characteristics needed for development plans.
- Provide researchers, users and stakeholders with the key data.

## Second stage: The design

The most important steps of this stage are:

### First: Identifying the statistical community:

The targeted statistical community of this bulletin include all (Saudi and non-Saudi) individuals who habitually live in Saudi Arabia.

### Second: Statistics sources:

Through statistical community, two kinds of statistics are collected:

- Umrah Survey Statistics
- Statistics derived from the administrative records of the Ministry of Hajj and Umrah.

### Third: Definitions and concepts:

- Administrative region:

A part of Saudi Arabia run by a governmental agency affiliated to the Ministry of the Interior. In each administrative region there is a city representing the region's headquarter. The kingdom is divided into 13 administrative regions.

- **Governorate:**

Part of the administrative region. It is the first administrative level within the administrative region components, and follows the region administratively.

- **Municipality:**

The administrative entity that reports to a governorate, or reports directly to the Emirate headquarter.

- **Populated locality:**

A static population cluster such as a city, village or a farm, or non-static like a cluster around a water source.

- **City:**

Refers herein to every locality with a municipality, or whose population exceeds 5.000 persons.

- **Head of Household:**

It refers to the person regarded by the household members as its chief member. Usually, he is responsible for taking decisions on household affairs and his age must not be under 15 years old. If the household consists of children and their mother, she shall be considered the head of the household.

- **Umrah performer:**

A person - Saudi or Non-Saudi, male or female - who performs Umrah during the year of the survey.

- **Individuals who performed Umrah:**

All individuals who performed Umrah during the year of the survey from the households that live in Saudi Arabia.

- **Population:**

It refers to all individuals, Saudi and non-Saudi population, living in the Kingdom at the time of the survey.

- **Survey population:**

The total members of the households selected in the sample, including domestic helpers and the like who live in one house, including the Saudis who are temporarily living abroad for education, business, tourism, etc.

#### Fourth: Determining sampling units:

**Primary sampling units:** The enumeration areas. They are withdrawn during the first stage of the sample design.

**Final sampling units:** The households. They are withdrawn during the second stage of the sample design, while each secondary sampling unit is considered a part of the primary sampling units.

#### Fifth: Determining and defining variables:

The variables that should be extracted when finding out the survey results are determined during this stage. Calculation formulas are also identified as follows:

Variable	Calculation formula
Aggregations and percentages to extract results and indicators	$= \frac{\text{(the total whose percentage should be identified from the sample)}}{\text{Total sample}} \times 100$

#### Sixth: determining statistical classifications:

Classification is defined as being an arranged set of related categories used for data collection according to similarity. It is the basis for collecting and publishing data in all statistical fields,

such as economic activity, products, expenditures, jobs or health, etc. It allows for classifying data and information through putting them into meaningful categories to produce useful statistics, considering that data collection requires precise and methodological arrangement in accordance with their common features so that the statistics can be reliable and comparable.

One of the classifications used in collecting the data of Umrah Statistics Survey is the Umrah Performers Classification, where Umrah performers are classified into internal and external/ Saudi and non-Saudi/ male and female Umrah performers.

### Seventh: Questionnaire design:

#### First: Questionnaires of field data collection:

The survey questionnaire was prepared and designed by specialists of Umrah Survey at GASTAT. The recommendations, standards, and definitions of GASTAT and the related entities were taken into consideration.

The questionnaire was divided into three sections by subject: **first section** was on household members data, **second section** was on Umrah performance, and **third section** was on expenditure and transportation in order to increase the questionnaire efficiency in achieving the technical requirements of the field work stage. Questions were paraphrased so that they can be asked in a unified way by the researchers, so that they get proper responses.

#### Second: questionnaires of required data from the Ministry of Hajj and Umrah:

GASTAT automatically completes the Umrah data from the Ministry of Hajj and Umrah through certain questionnaires that are designed to collect register-based data. These questionnaires include key and basic data of Umrah performers.

### Eighth: Designing the statistical framework and survey sample:

**Design of statistical frameworks plan:**

1. Designing and documenting an ideal plan to create a framework that covers the statistical community.
2. Developing lists, maps, and analytical characteristics of the units through which data providers can be selected.
3. Using common statistical records and frameworks as possible.
4. Determining the required metadata to create the statistical framework, and the test framework, and validating it to be used during the current round of the survey.

**Design of Sample withdrawal plan:**

1. A perfect plan is designed and documented to choose the sample units from which data will be collected with providing guarantee for obtaining efficient and highly effective estimations. Therefore, the survey community was divided into non-overlapping parts characterized by the homogeneity of their units. Every part is considered a layer, and every layer is treated as being an independent community where a random sample would be drawn separately from every layer. At the end, all drawn sampling units will be integrated to form an aggregate sample.
2. Choosing the sampling units from the statistical frameworks that have been designed to cover the targeted statistical community. The sample selection process is done through two stages: in the first stage, the primary sampling units are selected, which are the enumeration areas from the framework of buildings and real-estate units coding system. (1334) enumeration areas are selected within the census frame. These areas are distributed on all classes in all the administrative regions by using the suitable method to the size  $y$  considering the number of Saudi households in them. Then, the final sampling units (households) are randomly drawn from the enumeration areas chosen in the first stage using a regular random sampling method with (25) households in each enumeration area, which means a total of (33350) households all over Saudi Arabia.



3. Perfect methodology is prepared to choose the sample units with the aim of providing high-quality outputs with minimum burden on data providers using methods of rotation and overlap control.
4. Required metadata are specified to apply the statistical framework and to allocate and choose the sample.
5. The sample is tested, assessed and verified, and its use in the current frequency of the project is approved.

## Third stage: Organization

During this stage, the following procedures are done:

- 1- Preparing the required work procedures which will begin starting from next stage " data collection stage" and ends by the " evaluation stage".
- 2- Organizing these procedures and determining the proper sequence to come up with a methodology that achieves the objectives of Umrah Statistics Bulletin.
- 3- Benefiting from the previous bulletins of Umrah Statistics to test and develop the procedures of the current bulletin.
- 4- Describing and documenting these procedures to facilitate making updates in the next bulletins.
- 5- Testing and experimenting the statistical work procedures to make sure that they meet the requirements of Umrah Statistics Bulletin in its final version.
- 6- Approving the statistical work procedures and developing an implementation road map.



## Fourth stage: Data Collection

In this stage, all kinds of data are processed according to the proper method and the nature of these data:

**First: Umrah Survey Data Collection:**

**Sample design:**

1. During the collection process, the sample is selected according to the determined procedure in the "design of sampling plan". The selection is made at the level of administrative regions:

Administrative	Number of Households	Administrative Region	Number of Households	Administrative Region	Number of Households
Riyadh	5,175	Asir	2,250	Najran	1,600
Makkah	6,050	Tabuk	1,825	Al-Baha	1,500
Madinah	2,300	Hail	1,625	Al-Jouf	1,650
Qassim	1,650	Northern Borders	1,750	Total	33,350
Eastern Region	4,200	Jazan	1,775		

2. Verifying the selected sample and approving its use. This procedure can not be considered as part of the operations that rely totally on the data sources that already exist (such as the administrative data), as these operations create frameworks of available data.

#### Training and evaluation of field work candidates:

In this survey, candidates have been selected according to many standards that are associated with the nature of work. The focus was on the type of workers in terms of the educational level and experience of field works implemented previously by GASTAT. Moreover, the candidates must have a good conduct, sound senses and fits physically and psychologically. He should be 20 years or less, and must pass the Umrah Survey training program.

After that, All candidates ( Either GASTAT staff or collaborators from some government entities) are qualified and trained through special training programs as follows:

- A training program for specialized staff members in GASTAT head office.

- Similar training programs for collaborating inspectors, observers, and researchers from all the regions of Saudi Arabia.

The training programs include: lectures on technical, technological, administrative, and awareness materials that are used in data collection processes. In these lectures, researchers are introduced to the survey's objectives, the data collection method, and how to use maps. The training programs also include a detailed explanation of all questions on the questionnaire, as well as any technical and administrative tasks of all survey's participants with their different administrative levels.

At the beginning of the training program, all trainees are provided with tablet devices that enable them to do the following:

- Read the instruction manual and know its content while the instructions are explained by the trainer.
- Read the electronic questionnaire of the survey and explore how to fill it during pertinent steps of the workshops that accompany the training program.
- Log in to the "Training Program's Automated Assessment System", where the trainees can express their opinions about the training program through assessing its level in order to improve the quality of future training programs. This assessment included many standards such as: the lecturer knowledge of the presented material, the lecturer time management according to the times specified in the schedule, the lecture comprehensiveness, the lectures hall appropriateness, and suggestions to improve the training program)
- Log in to the "Trainees' Automated Assessment System" at the end of the training program, which is used to determine the trainees' comprehension level of the survey's concepts and instructions.

Labour forces are nominated to participate in the survey based on their results that are automatically obtained from the "Trainees' Automated Assessment System" to guarantee promptness, precision, and impartiality upon appointing the candidates and their competences.

### Field data collection method:

Umrah Survey is implemented annually. The method of direct contact with the household is adopted in the process of completing the survey questionnaire. The field researchers visit the households located within the survey sample. The researchers introduce themselves and show their official documents approving their statistical identity. They also clarify the aim of their visit, and present an overview of the survey and its objectives. The electronic questionnaire is then completed orally through direct contact. The survey questionnaire is filled based on the specified time reference in accordance with the number and population, social and economic characteristics of household members.

Field researchers at all work locations in the Kingdom use the “synchronization” feature available on the tablet devices to download and transfer the completed data of the household directly to the database linked to them at GASTAT headoffice where they are stored in a specific way to be reviewed and processed at a later stage.

### Verifying collected data and following up with data collectors and providers

The collected data are verified and reviewed by the field researcher, his inspector and the survey supervisor in the supervision area. All work areas are subjected to a monitoring and reviewing process from the Data Quality Room at GASTAT headoffice. This room controls and monitors the performance of all working groups in the field during the data collection process, starting from the first day and until the last day. The room undertakes several tasks mainly:

- Reviewing collected data and sending comments to field teams of all levels through an automated office system connected to the tablet devices used by researchers, so that they can get the comments automatically and instantly on their work sites.
- Contacting households by phone and asking them some of the questions on the questionnaire to check that the researchers collected the data correctly and complied with the instructions during their visits. These calls also seek to obtain any missing data and to thank data providers for their collaboration.
- Responding to field inquiries, whether those of the field researchers or household heads.

- Checking the accuracy of the location of completing the questionnaire by matching its coordinates with the ones recorded in the sample file.

#### Second: Administrative records' data collection:

The administrative records of governmental ministries and institutions are considered key sources of statistical data that are used in various fields. GASTAT coordinated with the Ministry of Hajj and Umrah to get data for the Umrah Statistics Bulletin which included data of foreign Umrah performers according to many variables.

After obtaining data from the electronic tables, those data are downloaded and saved on GASTAT databases in order to be audited and reviewed later in accordance with a scientific statistical approach and known quality standards. The source of data is referred to in case there are mistakes or comments on the data.

#### Fifth stage: Disaggregation of data:

During this stage, raw data are disaggregated based on the classification and coding inputs completed during the data collection process. They were disaggregated based on the statistical classifications and input codings mentioned in the design stage or any other classification or coding such as the geographic classification of data which includes the distribution of data at the level of administrative region, the qualitative and descriptive classification such as individual's gender and marital status, and the quantitative classification such as the individual's daily average expenditure on Umrah (accommodation- costs of living- transportation inside Makkah- provided services). Furthermore, data are presented in right tables in order to summarize, understand, as well as extract their results. Moreover, to compare them with other data, and to obtain statistical significances about the selected community. However, referring to such data indicated in tables is much easier than going back to check the original questionnaires that may include some data like names and addresses of household heads and data providers, which might violate the confidentiality of the statistical data.

In this stage, data is processed through a number of steps, mainly:

#### First: validating data comprehensiveness and rationality:

Data was reviewed to ensure its comprehensiveness and rationality, in addition to cross-referencing it to ensure its accuracy and correctness in a way that suits the nature of the data.

Results were derived and reviewed in the stages following the disaggregation of data to enhance the quality and accuracy of the statistics.

#### Second: Data anonymization:

To ensure data anonymity, GASTAT removed respondent identifiers from the field survey data, such as individual's name, address and other information, in order to protect people's privacy.

## Sixth stage: Revision:

During this stage, outputs are verified and explained by implementing a number of steps as follows:

#### Data outputs validation:

In addition to the revision process applied to the collected data in the fourth stage "Data collection stage" for validation purposes, and the revision processes in the following stage "Data disaggregation stage", all outputs are stored and uploaded to the database after being calculated by GASTAT to be reviewed and processed by specialists of Population and Vital Statistics through a revision software that uses revision screens designed for this purpose.

#### Dealing with confidential data:

Data must always be kept confidential, and must be used by GASTAT only for statistical purposes. Under no circumstances can that be allowed to disclose about any data of the households or their members. It is worth mentioning that the publications are statistical tables at the level of Saudi Arabia and its administrative regions and main cities by population characteristics.

## Seventh stage: Publication:

In this stage, the product is prepared to be published. The preparation go through the following steps:

#### Preparation of the results designed for publishing:

Through:

1. Downloading the results of data from the database of Population Statistics Surveys.
2. Preparing the data and indicators' publishing tables and charts.
3. Preparing metadata and writing the methodology.
4. Revising the bulletin before publishing it.

#### Preparing media kit:

After receiving the bulletin in its final version from the concerned statistical department „ Population and Vital Statistics“, media departments at GASTAT start preparing a press statement and infographic including the bulletin's key results. Then, specific media reports are prepared to be sent to some press agencies. The media kit is approved in coordination with the Population and Vital Statistics.

#### Data publication:

During this step, the following procedures are done:

- 1- The bulletin is uploaded to GASTAT portal.
- 2- Coordination with the media departments in the partner entities at the time of media material promotion.
- 3- The press statement is sent to (Saudi Press Agency, electronic and printed newspaper, TV channels and radio stations, and international press agencies).
- 4- Tweets and infographics are posted on twitter.
- 5- The bulletin is sent to a list of clients through email.
- 6- Recording the published media content of different media platforms in a daily basis, and dealing with that content according to the subject.

#### Responding to clients inquiries:

The clients questions and inquiries about the Umrah Survey Bulletin and results are received through five available channels: ( the website – clients support email- official letters- communication center- direct visits). The client is answered after coordinating with the concerned statistical department by using the appropriate channel. Information are provided

directly from the statistical library on GASTAT website or from the statistical department itself if necessary.

#### Preserving the published content:

The Bulletin's data are preserved and archived by Documents and Archives Center at GASTAT to be used as a reference at any time if needed internally or externally.

## Eighth stage: Evaluation

During this stage, the statistical process is evaluated starting from the collection stage until the stages that follow data publication. The evaluation aims at improving the whole process to get high quality data. The improvements include the methodologies, operations, systems, the skills of workers, standards, and statistical frameworks. This stage goes through a number of steps:

#### All measurable evaluation inputs:

The most important comments and feedbacks are documented and collected from their sources at different stages. Some are collected during the data collection stage such as the comments of data collectors and their field supervisors, in addition to the comments of data providers. However, some comments are collected during the revision stage such as the comments of those who are concerned with revising, auditing, and analyzing the collected data. Finally, the comments and notes of data users are collected and documented after being published.

#### The Evaluation process:

This is done by analyzing the collected evaluation inputs and comparing the results of this analysis with the expected results. Based on that, a number of potential improvements and solutions are determined and discussed with the concerned people from the related departments at GASTAT or with the clients and partners of Umrah Statistics Bulletin. Furthermore, the users' performance and satisfaction are measured during this stage, where unsatisfied clients are contacted and provided with more clarifications.

Based on this procedure, the suggested recommendations are agreed upon to get higher-quality data in the next release of this bulletin.





