PILOT CENSUS

7th Population & Housing Census 2022 (Digital Census)

EVALUATION REPORT

Pilot Census for

7th Population and Housing Census-2022

The First-ever Digital Census of Pakistan

Government of Pakistan
Ministry of Planning Development and Special Initiatives
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PREFACE

The Pakistan Bureau of Statistics (PBS) has been conducting national population and housing counts since 1951. The last population and housing census was conducted in the year 2017. But at the time of its ratification, the Council of Common Interests (CCI) decided to run the next population and housing census promptly using advanced technology. Thus, PBS initiated planning and organization for Pakistan's next census of people and households.

PBS has planned to use digital technology to conduct the 7th Population and Housing Census in 2022, which entails geotagging every house and structure and gather socioeconomic data digitally. PBS will use numerous tablet-based applications to enumerate homes and other structures and the number of people living in each. The successful execution of the census operation relies on the results of a pilot census, which tests all census methods, methodology, tools, and software. The major objectives pilot census is to assess the enumeration capability of system to enumerate two blocks in a month by an enumerator and to assess the functionality of digital edifice.

PBS conducted a pilot census between July 20 and August 3, 2022, in 33 administrative districts across Pakistan, including Gilgit Baltistan and Azad Jammu & Kashmir. This report analyzes the challenges encountered and insights gained during the pilot census. This report also proposes recommendations to ensure the seamless and efficient completion of Pakistan's next 7th and digital census.

I want to express my gratitude to everyone who contributed to the success of the pilot census, including the consulting firms, NADRA, NTC, SUPARCO, and other organizations. In addition, Also, I would like to thank the armed forces and civilian administration, without whom we would not have been able to accomplish this national objective.

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Chief Statistician

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Acronyms

AI	Artificial Intelligence
AIOU	Allama Iqbal Open University
AJK	Azad Jammu and Kashmir
API	Application Programming Interface
APKs	Android Package Kits
BISP	Benazir Income Support Programme
CAC	Census Advisory Committee
CAF	Civil Armed Forces
CAMPAS	Central Agency for Public Mobilization and Statistics
CAPI	Computer Assisted Personal Interview
CATI	Computer Assisted Telephonic Interview
CCI	Council of Common Interests
CDO	Census District Officer
CMC	Census Monitoring Committee
CSC	Census Support Center
DCC	District Census Coordinator
EA	Enumeration Areas
ERP	Enterprise Resource Planning
FAQs	Frequently Asked Questions
FS	Field Services
G2G	Government to Government
GB	Gilgit-Baltistan
GIS	Geographic Information System
GPS	Global Positioning System
IBA	Institute of Business Administration
IBM	International Business Machines
ICT	Islamabad Capital Territory
IMEI	International Mobile Equipment Identity
IPC	Inter Provincial Coordination Division
IT	Information Technology
KP	Khyber Pakhtunkhwa
LoI	Letter of Intent
MDM	Mobile Device Management
MoITT	Ministry of Information Technology and Telecommunication
MoPDSI	Ministry of Planning, Development and Special initiatives
MoU	Memorandum of Understanding
N3C	National Census Coordination Center
NADRA	National Database and Registration Authority
NGO	Non-government Organization
NRTC	National Radio and Telecommunication Corporation

NTC	National Telecom Corporation
NTISB	National Telecommunication and Information Technology Security Board
PBS	Pakistan Bureau of Statistics
POIs	Points of Interest
PPRA	Public Procurement Regulatory Authority
PSIC	Pakistan Standard Industrial Classification
PU	Punjab University
QRF	Quick Reaction Force
SDS	Software-defined Storage
SOPs	Standard Operating Procedures
SRS	Software Requirements Specification
SUPARCO	Pakistan Space and Upper Atmosphere Research Commission
TORs	Terms of Reference
UAJ&K	The University of Azad Jammu & Kashmir
UTN	Unique Token Number
VHR	Very High Resolution
VPN	Virtual Private Network

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Executive Summary

The General Statistics (Reorganization) Act of 2011 entrusted Pakistan Bureau of Statistics (PBS) with carrying out the Population and Housing Census. Pakistan has conducted six population and housing censuses: 1951, 1961, 1972, 1981, 1998, and 2017. To ensure that the seventh Population and Housing Census findings are accurate, transparent, and widely accepted, the Council of Common Interests (CCI) decided to conduct the census utilizing the most recent technologies. As a result, PBS has begun organizing and preparing for the 7th Population and Housing Census, which will be carried out digitally across the country, including Gilgit-Baltistan and the Azad State of Jammu and Kashmir. Using tablet-based data collection, self-enumeration, real-time monitoring and supervision using dashboards, geo-tagging of structures, online data synchronization, and editing checks during data collection will reduce the time between data collection and the release of results.

The census methodology, technology tools, data processing procedures, tabulations, and imputation rules must be verified to avoid any inconvenience or unexpected results and it also helps to save resources. Therefore, from July 20 to August 3, 2022, PBS conducted pilot censuses in 33 administrative districts across Pakistan, including Azad Jammu and Kashmir, and Gilgit-Baltistan.

The Master Trainers received three days of training at PBS headquarters from July 5th - 7th, 2022. The enumerators were then trained in the field by Master Trainers at 27 stations between July 13th and 17th, 2022. The respective district administration of each province/district provided the enumeration and supervisory staff. The De-Jure data collection method was used in the pilot census, as proposed by the Census Advisory Committee and approved by the CCI.

Despite the fact that eight modules were decided to be tested during the pilot census, only two modules could be tested. During the pilot, the house/structure listing and enumerator data collection applications were utilized and tested with limited capability. The main challenges faced during the pilot were:

i.	provision of old and used 554 tablets for data collection	vi.	inaccessible enumeration blocks due to their distance from CSCs, especially in Balochistan and Khyber Pakhtunkhwa
ii.	Rapid battery drain		
iii.	Extensive charging time		
iv.	Non compatible SIMs with the available network	vii.	delays in resolving technical problems
v.	technical shortcomings of NADRA staff deputed at Census Support Centers (CSC) in each census district	viii.	adverse weather conditions, and
		ix.	SUPARCO satellite compatibility

Challenges experienced during the pilot census show that the system could not undergo extensive testing. Its primary reason was the absence of adequate electronic data collection systems. A successful pilot is crucial, given it will be the country's first digital census. Before the census is carried out at the national level, the learnings from pilot census have to be incorporated before full roll out.

Therefore, it is suggested to execute a second pilot following the availability of all necessary hardware, accessories, and software modules, as well as an accurate map and geographically suitable sims to ensure transparent and credible census. It is also recommended that scalability tests for some software processes must be added. Similarly, parameters for accuracy and security could be set and tested for different software solutions before the full-scale field operation of Census 2022.

Chapter 1
Introduction of Population and Housing Census-2022

Chapter 1: Introduction of Population and Housing Census-2022

The first chapter introduces the population and housing census and its history in Pakistan. The CCI decision, government directions, Census Advisory Committee recommendations, and consultative process with stakeholders are explained in detail. This chapter also explains the digital census's planning, preparation, and requirements for hardware, technology, and software modules, data infrastructure, and storage capacity. This chapter also covers questionnaire design, instruction manuals, training locations, census support centers, and security measures.

1.1   Background

According to the General Statistics (Reorganization) Act 2011, the Pakistan Bureau of Statistics (PBS) is mandated to conduct population and housing censuses in the country as well as other data collection activities. In 1951, 1961, 1972, 1981, and 1998, PBS conducted population and housing censuses throughout the country. After 1998, the last census was scheduled for 2008, but it was postponed until 2017. On December 7, 2016, the Supreme Court of Pakistan decided to hold a census in the country beginning March 15, 2017, and completed within two months. As a result, the Council of Common Interests (CCI) in December 16, 2016, approved the conduct of the 6th Population and Housing Census (Census 2017) in two phases beginning on March 15, 2017 (Annex-1).

The provisional summary results for Census 2017 were compiled after receiving the necessary approval from CCI at its meeting on August 25, 2017. The results were given to the press and posted on the PBS website so that government officials, academics, researchers, and the general public could all use them.

Figure 1.1: Clips from Ministers' Committee Meetings

CCI considered the summary for approval of the Minister's Committee recommendations for approval of Census 2017 final results at its 44th meeting on April 7, 2021. However, it was

decided that the CCI meeting would be held on April 12, 2021, with a single point agenda of "*Notification of Census-2017 Results*." As a result, at its 45th meeting on April 12, 2021, the CCI approved the final results of the 6th Population and Housing Census-2017[1] and decided that "*the process of the next census should begin as soon as possible according to international best practices using the latest technology*" (Annex-2).

In accordance with the CCI decision, PBS began planning for the country's first Digital Population and Housing Census. For this purpose, the Government of Pakistan established a Census Advisory Committee (CAC) comprised of renowned demographers and experts to develop recommendations for the 7th Population and Housing Census based on international best practices (Annex-3). The Committee met several times and, after extensive deliberation, recommended that the census be conducted "digitally" with real-time monitoring for greater transparency and acceptance.

The Census Advisory Committee's main recommendations are as follows:

- All structures must be geo-tagged and counted digitally, with real-time online monitoring
- Ensure universality: counting the entire population residing in the country at the time of the census, regardless of its status or possession of a CNIC
- The de-jure method of enumeration is recommended, which means that a person is counted at his or her usual place of residence. This method is widely used internationally and has been used in all previous Pakistani censuses
- A single census questionnaire may be administered, but it must be strictly relevant to the census objectives
- While law enforcement agencies can be used for security, they cannot perform any task for enumeration and verification
- Field data collection and monitoring may be performed by provincial government employees. Comprehensive trainings and graduate student participation in the enumeration process are recommended
- Involvement of stakeholders, particularly provinces and political parties, from the beginning to the end, i.e. from planning to the finalization of results
- Establishment of a National Census Coordination Center (N3C) with provincial government representation for effective monitoring, coordination, and policy decisions.
- An effective publicity campaign, including social media use, clarifying the primary goal of the census. The campaign may begin early and continue until the first preliminary results are released.
- Conduct a pilot census to test the entire process, as well as a post-enumeration survey to assess data reliability and coverage.

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[1] In Pakistan, since its inception, six population and housing censuses have been conducted at various times, as follows: 1951, 1961, 1972, 1981, 1998 and 2017. The population enumerated during these censuses with rural/urban breakup and by sex is given in the annexures (Annex-2) and (Annex-3), respectively.

Figure 1.2: Pictures from Meetings of Census Advisory Committee

The Federal Cabinet approved the Census Advisory Committee's suggestions for submission to the CCI on October 5, 2021. The CCI approved the recommendations of the Census Advisory Committee for conducting the 7th Population and Housing Census, together with the census work plan with timeframes, census questionnaire, census monitoring committee, and its TORs, at its 49th meeting on January 13, 2022 (Annex-4).

1.2 Consultative and Sensitization Process

In response to the recommendations of the Census Advisory Committee, PBS initiated a consultative process with provinces/regions. PBS also organized sensitization workshops for the stakeholders and government functionaries, including the relevant provincial secretaries, divisional commissioners, and deputy commissioners, to plan and prepare for the next census in 2022.

1.2.1 Consultative Meetings with Provinces

On August 13, 2021, under the chairmanship of the Secretary, MoPDSI, an online orientation conference with the chief secretaries of every provincial and area governments was held as per the recommendations of the Census Advisory Committee. It was decided that prior to finalizing their proposals for approval from the appropriate forum, PBS teams will meet the respective governments in-person for a thorough discussion and comment on their suggestions.

Following the decisions of the preceding meeting, five further meetings with provinces were held from September 6th to 16th, 2021. (Details as in Annex-5). These meetings were a significant step towards increasing stakeholder and province confidence, which helped gaining province support during the census process and ensure the acceptability of census results.

Punjab: 6th September, 2021

Sindh: 8th September, 2021

Balochistan: 10th September, 2021

Khyber Pakhtunkhwa: 13th September, 2021

Figure 1.3: Clips from Consultative Meetings with Provinces

1.2.2 Sensitization Workshops with Stakeholders

With the challenging timelines of the first-ever digital census in mind, the Minister for PDSI, during a review committee meeting held on November 26th, 2021, emphasized the importance of prior sensitization of the forthcoming Population and Housing Census-2022. These workshops were suggested to sensitize stakeholders and the public.

In this regard, PBS decided to hold sensitization workshops at the provincial level to raise public awareness about the census process and build trust by involving academia, universities, researchers, demographers, data users, NGOs, and other stakeholders. Six sensitization workshops were held in provincial capitals from December 24, 2021 to January 10, 2022. A few photos from the sensitization workshops held at provincial and regional headquarters are shown in Figure 1.4.

Islamabad: 24th December, 2021

Punjab: 28th December, 2021

Sindh: 30th December, 2021

Khyber Pakhtunkhwa: 5th January, 2022

Azad Jammu and Kashmir: 10th January, 2022
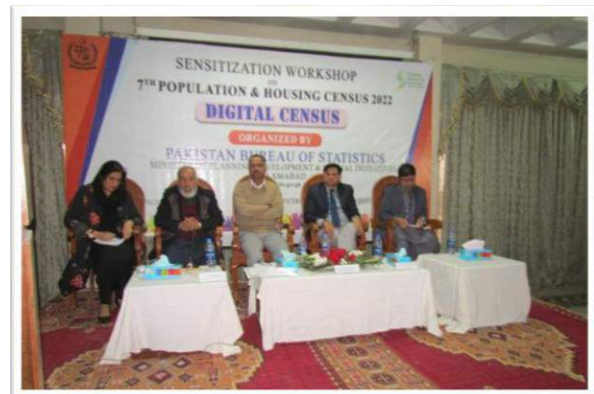
Balochistan: 3rd January, 2022

Figure 1.4: Sensitization Workshops at Provincial and Regional Headquarters

1.2.3 Sensitization Workshops with Government Functionaries

Following the decision of the CCI and the Minister for PDSI 's instruction, another sensitization process round began on May 23, 2022, and workshops were held by the PBS team at all provincial and regional headquarters. The workshops' primary objective was to explain the roles and responsibilities of provincial and district administration regarding the conduct of Census 2022. Therefore, the relevant Secretaries, Divisional Commissioners, and Deputy Commissioners were invited to these workshops. Chief Secretaries of the respective

governments headed these events. A few clips from the workshops conducted at six cities from May 23, 2022, to June 11, 2022, are given in Figure 1.5

Lahore: 23rd May, 2022

Karachi: 25th May, 2022

Quetta: 27th May, 2022

Peshawar: 30th May, 2022

Muzaffarabad: 6th June, 2022

Gilgit: 11th June, 2022

Figure 1.5: Photos from Sensitization Workshops with Government Functionaries

1.3   Requirements of Digital Census

Technological advancements and subsequent access to modern technology have greatly simplified the process of conducting a population census. Modern technology permits end-to-end embedding of processes in the census value chain. This possibility includes everything

from planning to monitoring and implementing to evaluating results. The use of technology[2] can benefit many aspects of census activities. This means that understanding the value of technology use and selecting the appropriate one is critical for the processes.

To ensure the census's success, all requirements for implementing electronic data collection technology must be identified and plans developed early in the census's life cycle. Figure 1.6 shows a schematic representation of these hardware and IT-related requirements.
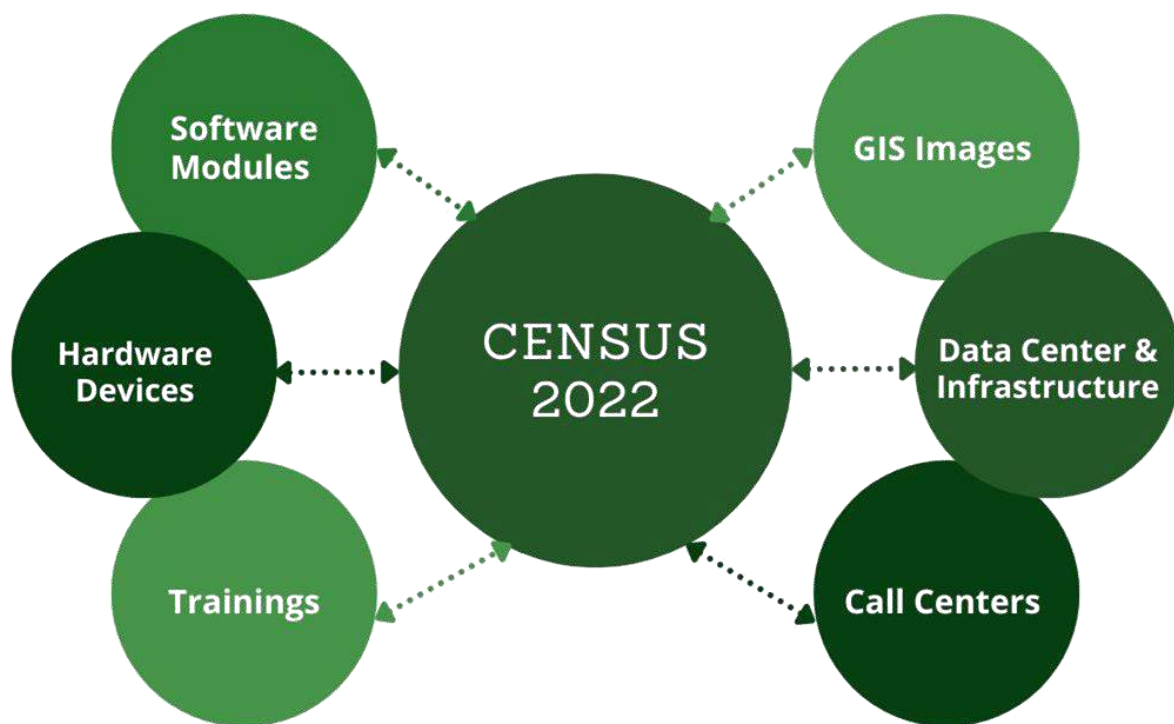
Figure 1.6: A Schematic Representation of Hardware and IT Related Requirements

The 7th Population and Housing Census-2022 is Pakistan's first digital census, and its requirements are unique and challenging compared to paper-based methods. The requirements are: step-by-step planning and preparation of the entire process, preparation of digital maps with high-resolution imagery, acquisition of tablets, and development of census software (for structure listing, census enumeration, real-time monitoring, and field coordination, among other things), acquisition of data infrastructure and storage, and data processing, analysis, and dissemination. Therefore, the processes described in the following sub-sections have been given special attention to ensure completion before the full-scale field operation of Census 2022. The Census Advisory Committee thoroughly deliberated and recommended many of these aspects for the 2022 Census.

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[2] "Principles and Recommendations for Population and Housing Censuses" (Revision 3), Department of Economic and Social Affairs, Statistics Division, United Nations, New York, 2017. (Emphasis added)

1.3.1 Establishment of National Census Coordination Center (N3C)

One of the recommendations of the Census Advisory Committee was to establish the National Census Coordination Center (N3C) as the secretariat of the Census Monitoring Committee (CMC). CMC was constituted by CCI and it comprises of all Chief Secretaries, relevant Provincial Secretaries (for education, health, local government, etc.), Senior Members of the Board of Revenue, Secretary IPC, DG Military Operation, PBS officials, Chairman NADRA and others. Main features of N3C were envisioned as under:

- The N3C will be the centralized decision-making center, equipped with cutting-edge technologies such as audio video conferencing and a video wall for real-time progress and monitoring of field activities for Census 2022 coordination and monitoring.

- The N3C will be linked to all provincial headquarters as well as 628 Tehsil-level Census Support Centers (CSCs) for progress reviews and discussions about ongoing activities.

- Multiple dashboards will be available online 24 hours a day, seven days a week to show progress and trends, as well as the GIS based monitoring of field activities.

- Studying trend analysis and data insights for informed decision making is facilitated by IT experts and demographers.

The N3C was commissioned on 18th February 2022 and inaugurated by the then Minister for PDSI, Mr. Asad Umar on 22nd February 2022, following the completion of final testing.

Figure 1.7: Inauguration Ceremony of N3C Held on 22nd February, 2022

1.3.2 Requirement of Census Software

PBS initially planned eighteen census software modules to perform various tasks, digitally, for Census 2022 (Annex-6). However, after extensive internal discussions and deliberation, it was realized that some modules share common characteristics. As a result, the 'Supervisor Dashboard module' and the 'Data Synchronization module' were combined with the 'Indicator and Trend Analysis module' and the 'Android House Listing and Enumeration Data collection module,' respectively. Table 1.1 displays the final sixteen modules.

Table 1.1: Software Modules Finalized for Census-2022

S. No.	Software Modules	S. No.	Software Modules
1	Self-enumeration web portal	9	GIS based Dashboard Monitoring System
2	HR & Task Assignment Web Portal	10	Dashboard for Trend Analysis
3	Training Web portal	11	Data Cleaning Module
4	Inventory Management	12	Complaint Management System
5	Android House listing App	13	Reporting Module
6	Android Enumerator Data Collection app	14	Public Data Dissemination Portal
7	Communication application	15	CATI support module
8	Area Frame Application Update	16	MDM

1.3.3 Census Hardware and IT Infrastructure

PBS operates its own data center; however, it required upgrades to comply with tier-III datacenter standards, including sufficient power backups, precision cooling, network, server, and application security, environment monitoring and control, fire suppression system, and access control systems, as well as the introduction of a secondary site with disaster recovery capabilities. Given the short timelines, procuring and completing the data center upgrade was impossible. As a result, the "NTC" Datacenter was used to provide 24/7 support with multiple active sites, including a disaster recovery site.

The list of hardware and IT-related requirements for the digital census included

- 126,000 tablets and related accessories
- Hardening and preparation of tablets
- Internet SIMs from telecom services
- Computer storage and network resources

- Two sites—one primary site and one disaster recovery site
- Internet and intranet connectivity of sites
- Data security
- IT support from Census Support Centers to field staff
- Establishment of call centers

1.3.4 Acquisition of Hardware and Software

In its 49th meeting held on January 13, 2022, CCI approved the 18-month work plan to complete the task of providing data for the next election in 2023. Confronted with the challenging timelines, PBS began consultative meetings for a Government to Government (G2G) solution with the National Database and Registration Authority (NADRA), the National Radio and Telecommunication Corporation (NRTC), the Space and Upper Atmosphere Research Commission (SUPARCO), and the National Telecom Corporation (NTC) for the provision of software, hardware, the most recent high-resolution imagery, and allied services required for the successful completion of the digital census.

PBS initiated meetings with NADRA to meet census deadlines. After the Technical Committee evaluated their revised proposal, a Letter of Intent (LoI) was issued to NADRA to acquire software, hardware, and allied services.

On June 20, 2022, the contract was signed with NADRA for the provision of the following services to conduct the 7th Population and Housing Census-2022. The contract was finalized after being vetted by technical organizations and stakeholders such as MoITT, NTC, and SUPARCO

- 126000 tablets, with allied accessories (secured, hardened devices)
- Census Software Solution (ERP)
- Data SIMs and secure data connectivity
- Census field support services

On the same day, Professor Ahsan Iqbal, Federal Minister for PDSI, unveiled the logo at PBS headquarters in Islamabad.

MoU Signing Ceremony with NADRA   **Inauguration of Digital Census Logo**

Figure 1.8: MoU Signing Ceremony and Inauguration of Digital Census Logo

1.3.5 Acquisition of High-Resolution Imagery

Digital area-frame maps are central to digital enumeration. PBS has already digitized its area frame, which consists of approximately 182,000 blocks, and is conducting surveys using the digitized block boundaries via tablets. However, due to the sensitivity and volume of the census project, PBS decided to acquire the most recent satellite imagery accurately to a level that does not affect the accuracy of structure geo-tagging. PBS had extensive deliberations with SUPARCO, Pakistan's national space agency specializing in GIS and space science research, for the imagery and GIS requirements. As a result, it was decided to acquire the following SUPARCO services.

- High resolution digital satellite imagery of 0.3-meter resolution for 18 districts and 0.98-meter resolution for remaining areas for reconciliation and ground reference, not more than 6 months old.

- Support in terms of infrastructure and human development for hosting Digital Enumeration Area Maps on PBS Server.

After the completion of the formalities, a contract signing ceremony was held between both parties on June 1st, 2022 at PBS HQ, as shown in Figure 1.9.

Figure 1.9: Contract Signing Ceremony with SUPARCO

1.3.6 Acquisition of Data Infrastructure and Storage

Computing, network, and storage infrastructure are among the primary concerns, with data and application security planned to be ensured through the involvement of the National Telecommunications Corporation (NTC), which is mandated for these objectives and has specialized storage and network security capabilities. NTC has a well-established tier-III Datacenter Infrastructure, capable of handling massive census enumeration data transfer, storage, networking, and computation.

In response to NADRA's requests, NTC provided a comprehensive proposal that included two physical sites: one physical production site at its Islamabad data center and one physical Disaster Recovery (DR) site at its Lahore data center. Both sites were suggested to establish the same infrastructure resources and licenses, except the primary site has the additional requirement of 50TB for backup.

On both sites, all infrastructure services, including computing, storage, load balancers, firewalls, network equipment, and licenses, are rented. For real-time replication, point-to-point connectivity is used between the primary and DR Sites.

1.3.7 Provision of Call Center Services

This PBS call center will serve as an information hub for a seamless interface between the public and census activity both during and after the census. It will not only be used for general complaint resolution, but also for public inquiries about the census process, on-field activities, and other census frequently asked questions. It will also work for the CATI approach wherever the census field operation is taking place.

NTC is in the process of setting up a call center in PBS; however, for the use of the pilot census, temporary arrangements for six agents were made in NTC's existing call center. The

purpose of the temporary arrangements was to gain hands-on experience for the overall operation of the contact center.

1.3.8 Deployment of Census Field Staff

As has been the norm, the respective provincial government's mechanism will supervise the field operation of the 7th Population and Housing Census-2022. Provincial Chief Secretaries, the administrative leaders of their provinces, carry out the federally-designed census plan. In this regard, their offices issue all orders and directives to the Divisional Commissioners, Deputy Commissioners, and Assistant Commissioners.

For effective administrative support for conduct of Census 2022 activities, Census Districts have been established nationwide, including Gilgit-Baltistan and Azad Jammu & Kashmir. In Punjab, Sindh and Khyber Pakhtunkhwa tehsils have been designated as Census Districts, whereas in the rest of the country, including Gilgit-Baltistan and Azad Jammu & Kashmir administrative districts have been declared as Census Districts. The administrative heads of administrative districts and tehsils have been designated as Census District Officers (CDOs). The Census Districts have been subdivided further into Census Charges, Census Circles, and Census Blocks according to Table 1.2.

Table 1.2: Setup of Census Districts, Charges, Circles and Blocks for Census-2022

Setup	Comprising of
Census district	Administrative District/ Tehsils/ Cantonments
Census charge	Qanungo Halqa/ Part of towns/ Cantonments. 5 To 7 Circles in a Charge
Census circle	Patwar Circle/ Part of towns/ Cantonments 5 To 7 blocks in a Circle
Census block	200 To 250 houses in a block

PBS has completed the deployment of its staff consisting of Statistical and Geographical Assistants with Census District Officers in 495 Census Districts for effective coordination with the provincial and regional administration, particularly at the Census Districts level, and local census field staff such as supervisors and enumerators. They facilitate communication between PBS administration, provincial and regional administration, and local field staff regarding census instructions, complaints and suggestions, and logistical support, in a timely and effective manner. In addition, the deployment of 120,000 Enumerators/ Supervisors/ Superintendents has been completed.

1.3.9 Establishment of Census Support Centers

Since the Census-2022 will be conducted digitally for the first time in the country, therefore, to ensure smooth processes and functional availability of the system 24/7, dedicated Census Support Centers (CSCs) are needed to be established at the Tehsil/Census District level. These centers will act as a backbone for the census field operation, having primary responsibilities

of handling/ taking of handheld devices, installation & configuration of apps, etc. Moreover, they will perform every support function in the field. The CSCs will act as Control Room and complaint inquiry office in each Census District. For this very reason and effective coordination, monitoring and IT Support, the establishment of CSCs at the Census District level was recommended by the Census Advisory Committee.

PBS, dated 30th March 2022 (Annex-7), had requested all the CDOs to establish the Census Support Center at an appropriate place with all the necessary facilities, such as electricity, internet, drinking water, etc., to conduct the Census-2022. Presently, the establishment of the Census Support Center at the Census District level has been fully accomplished, and Census District Officer (CDO) has been appointed as the in-charge of the center in each district. The centers have been furnished with all the necessary IT equipment, furniture & fixture, and technical staff have been deputed for support to technical field staff/enumerators/supervisors. It is also planned that during the Census-2022, these centers will work as complaint centers for the field staff and the general public.

1.4   Role of Consulting Agencies

The following is the role of consulting agencies, NADRA, NTC and SUPARCO, regarding provision of hardware and software for Census-2022.

Table 1.3: Role of Consulting Agencies for Census-2022

Tasks	Description	Consultancy Agency
Tablet device and allied accessories	Provision of 126000 tablet devices and allied accessories Provision of 126000 secure data SIMs Hardening and preparation of tablet devices Dispatching and trivial of tablet device	NADRA
Datacenter Infrastructure	Compute storage and network resources as per NADRA requirements Two site, one primary site at NTC Islamabad and one disaster recovery site at NTC Lahore Intranet and internet connectivity of sites Software licenses required for datacenter	NTC
Census Support Centers	Office, furniture & fixture and internet Coordination with HQ of PBS IT support to field staff Provision of internet devices	PBS PBS NADRA NTC
Call center	Establishment of call center at PBS HQ Operationalization of call center for 6 months Technology transfer to PBS	NTC
Census Software	Provision of complete turnkey solution Hosting of census software solutions at infrastructure provided by NTC Syncing of data and data security	NADRA
GIS imagery	Provision of GIS imagery	SUPARCO

1.5   Engagement of Print, Electronic and Social Media

A successful communication strategy is essential to the overall success of the census. The Census Advisory Committee's advised PBS to start effective communication campaign, early in the census implementation process and continue throughout the census exercise, clearly disseminating the following important information.

- Significance of the census
- Duration of enumeration
- Clarifying ambiguity, especially for the groups who did not approve previous results
- Description of processes
- Encouragement for cooperation (confidentiality of personal information)

I.   Print and Electronic Media Advertisement Agency

In pursuance of above directive, PBS advertisement to appoint print and electronic media agencies was published through PID. Twenty-three companies participated in the tender, with 17 of them being approved by the evaluation committee to get reviewed in three subsequent meetings. Ten companies were shortlisted for the final presentation, and three were chosen based on their relevance and creative work.

II.   Social Media

In this digital age, social media platforms such as Twitter, Facebook, WhatsApp, Youtube are the major means for information and communication. Therefore, PBS advertised to engage services of social media communication firm.

Four social media advertising firms submitted proposals, and one was selected based on the presentation and creative work. PBS's six social media platforms are effectively managed by the company.

f	facebook.com/PBSofficialpak
twitter	twitter.com/PBSofficialpak
in	linkedin.com/cpmpany/pbsofficialpak
instagram	instagram.com/company/pbsofficialpak/
youtube	@PBSofficialpak
snapchat	@PBSofficialpak

Figure 1.10: PBS's Social Media Platforms

1.6   Questionnaire Designing

The Census Advisory Committee appointed a technical committee to finalize the questionnaire, and the following subsections elaborate on the final enumeration and listing questionnaire for the 7th Population and Housing Census in 2022.

1.6.1 Technical Committee on Questionnaire Finalization

The Census Advisory Committee made the following decisions regarding questionnaire design for the 7th Population and Housing Census-2022:

a. The Census questionnaire should be as relevant to the census objectives as possible and as brief as possible in order to improve data quality.

b. Two questionnaires may be designed:

    i. 1st House listing form comprising of 4 to 6 questions (Form-1)

    ii. 2nd Main Census form comprising of 10 to 12 questions (Form-2)

        • Demographic characteristics i.e. age, gender, religion, ethnicity, nationality, disability, migration, literacy and education attainments etc.

        • Housing characteristics i.e. number of rooms, electricity, drinking water, gas, toilet, construction material, gender of household owner etc.

c. It is further recommended that *a Dedicated Technical Committee* may be constituted by involving all relevant stakeholders to finalize the details of the questionnaire.

The Technical Committee to finalize the questionnaire for Census-2022 was constituted (Annex-8) with the following ToRs:-

"The committee will finalize the questionnaire in the light of the recommendations of the committee constituted for recommendations and adoption of best practices for upcoming census at earliest possible time."

Figure 1.11: Meetings for Finalization of Questionnaires of Census-2022

1.6.2 Final Questionnaires for Listing and Enumeration of Census-2022

The committee met on three separate occasions to finalize the questionnaire: first meeting of the committee was held on 29th September, 2021 (Annex-9), whereas second and third meetings were held on 28th October, 2021 (Annex-10) and 24th November, 2021 (Annex-11), respectively.

I.   Listing Questionnaire

The technical committee finalized the census questionnaire and developed an integrated listing form that covers structures comprising both economic and housing units. The main purpose was to develop a sampling frame for use in different kinds of household-based socio-economic surveys.

Furthermore, in light of the need to develop a framework of establishments with economic activities for the upcoming economic census, the listing form has been amended/modified following extensive discussions with the relevant PBS sections. PBS would be able to use this frame for future surveys/studies in a broad spectrum by including all types of socioeconomic surveys, saving approximately $1 million. This frame will also provide categorical information on educational institutions, health facilities, masjids/madrasas, high-rise commercial, and residential buildings, and so on, along with their location via Geo-tagged data.

Prior to Census-2022, all the structures will be listed to identify the households for enumeration and publication of their data. However, during the listing operation of Population and Housing Census-2022, all the structures will be marked with unique numbers and geo-tag to ensure comprehensive coverage within each block. The information regarding housing and economic units, name of head of household/ economic institution, phone number, domestic economic activity, institutional/establishment level economic activity along with manpower will also be collected.

II.   Enumeration Questionnaire

Following the detailed deliberations by the Technical Committee on questionnaire finalization, some questions were recommended to be updated/added in the short form used in Census-2017 (Annex-12) for inclusion in the single enumeration questionnaire (Form-2) of Census-2022. The detailed questionnaire changes are given in Annex-13.

On the basis of the recommendations of the Technical Committee to finalize census questionnaire, questionnaire forms on house listing, housing characteristics, and demographic characteristics for Census 2022 have been prepared in Urdu. The final questionnaires are placed in Annex-14.

1.7   Hiring of Training Firm

An effective training strategy is central to the successful implementation of a population and housing census. As a result, the Census Advisory Committee reviewed the training procedure for the 6th Population and Housing Census-2017, as well as the regional/developed countries training mechanism, and realized that all countries planned the training activity using modern technologies, with adequate time and monitoring of the training process. Based on the experiences of other countries, the committee recommended that trainings must be designed by engaging training specialist/consulting firms and utilizing modern technologies.

Therefore, PBS decided to hire a training specialist/consulting firm to train master trainers and enumerators on using modern technologies. To create interactive training material, it was decided to develop the contents in regional languages wherever possible. A comprehensive RFP was created for this purpose, and a national advertisement to hire a reputable firm was published. Following the completion of the due process and the recommendation of the PBS Technical/Purchasing Committee, a firm was hired, and a Letter of Intent was formally issued on May 7, 2022.

1.8   Census Manuals and Training Tutorials

The firm hired by PBS to train master trainers in the field was also responsible for preparing Manual of Instructions (Conceptual), Manual of Instructions (IT devices), Ethical Manual, Field Operation Manual, and audio/video tutorials to explain various census concepts in collaboration with PBS. These manuals' first drafts were completed before conduct of pilot census. The draft Manual of Instructions (Conceptual manual) was also used for pilot census training of master trainers and enumerators. The title pages of these four manuals are depicted in Figure 1.12.
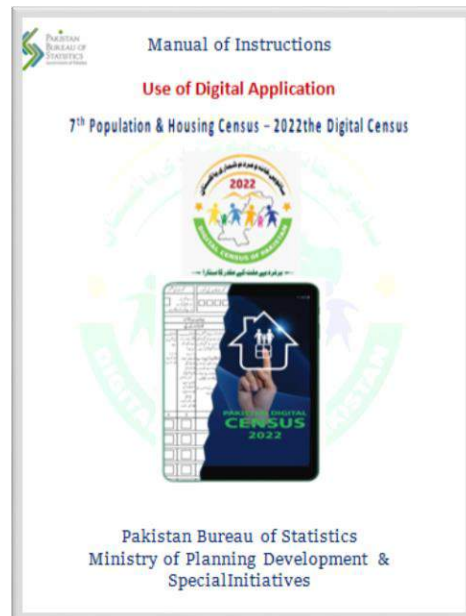

Conceptual Manual

Operational Manual

Ethical Manual

Use of Digital Application Manual

Figure 1.12: Manuals for 7th Population and Housing Census-2022

1.9   Establishment of Training Venues

The Census Advisory Committee provided detailed recommendations to ensure that field staff is properly trained and understands the questionnaire (Annex-15). PBS prepared a comprehensive plan with three tiers of training. The three tiers comprise training of master trainers in Islamabad, training of trainers at the divisional level, and training of enumerators at the tehsil level. The finalization of training venues for the full rollout is currently underway.

1.10   Security Arrangements for Census Field Staff

Federal Cabinet in its meeting held on 5th October, 2021 considered the summary titled "Approval of Recommendations for conduct of 7th Population & Housing Census" dated 4th October, 2021 submitted by MoPDSI (Annex-16), and approved the recommendations of the Advisory Committee on the 7th census, as contained in Para 3 thereof, including the following regarding the role of Armed Forces and enumeration methodology: "*Armed Forces shall be engaged to accompany the enumerators for security purposes only. The conduct of census shall be done exclusively by the enumerators.*"

CCI approved in its 49th meeting on January 13, 2022 that *"Armed Forces shall be engaged to accompany the enumerators for security purposes only,*" but Military Operations Directorate, after necessary internal consultations, conveyed in their letter dated 5th July, 2022 (Annex-17) that Civil Armed Forces and Pakistan Army will work as 2nd and 3rd tier responders, respectively, in Quick Reaction Force (QRF) mode to facilitate creation of a secure enabling environment for the census process.

PBS, on the other hand, proposed that, given the sensitivity of the matter the matter be considered in light of the CCI decision so that armed forces may be deployed to accompany the enumerators for credibility of the entire process and to avoid the situation faced in 1990 and 2011, which resulted in abandoning of census conduct. However, after receiving the necessary approval from the Federal Cabinet, the Ministry of Interior issued a notification for the deployment of Civil Armed Forces and Pakistan Army as second and third tier responders (Annex-18). As a result, first-tier security will be provided by the respective provincial home departments through their police/frontier constabulary/levies.

Figure 1.13: Meeting on Security Arrangement for Census Field Staff

Chapter 2
Pilot Census of Census-2022

Chapter 2: Pilot Census of Census-2022

The second chapter focuses on the actual execution of the pilot census, including its planning, preparation, training, field enumeration, and problems encountered during these procedures. For International comparisons, the goals of the pilot census and comparisons of the pilot studies carried out in other countries are provided. The methodology and sample selection procedure for 33 districts and 417 enumeration blocks have been explained here. The distribution of tablet devices and their operation during enumeration has also been revealed, along with the limitations.

2.1 Overview

Pilot Census is a comprehensive test of all the census procedures. A pilot census must cover areas and populations during the preliminary stages of testing the validity and suitability of the entire census plan. The primary goal of the pilot census is to test the cartography, methodology, organization structure, data collection method, questionnaires, logistical planning, interaction, and coordination of all resources.

For effective results, the conditions in the pilot census must be similar to those planned for complete census enumeration. On the other hand, sufficient time is needed to reflect on the implementation challenges identified during the pilot census, analyze them, make recommendations for improvements, and reform the census processes to ensure an effective and efficient census operation. The peculiar domestic needs/requirements must also be taken into account and not overlooked when making important decisions on the matter. Therefore, this pilot census review would be critical in making future decisions regarding the implementation of timelines previously envisioned and deliberated for the main census field operation.

2.1.1 Aim and Objectives of Pilot Census

A pilot census ensures that technology testing for end-to-end business process and identifies major implementation issues with functionality or capability. *However, the pilot census alone is insufficient to fully test technology due to its reduced size, reduced public profile and non-existence of some risks that are present in a fully-fledged census operation.* The pilot test should be accompanied by activities that aim to determine whether technology solutions are scalable, secure, accessible, and robust enough to be used in the actual census. During the testing phase, stress tests should be performed to ensure that the technology can handle the maximum load of each module or business case while maintaining data integrity.

There are a number of risks or drawbacks associated with the introduction of technology that should be considered and managed; otherwise, these could result in increased expenditure, delays in the census timetable, or impacts on census quality. These include:

- Incompatibility or other integration issues between different hardware and software applications

- Solution outage or failure (which could be for many reasons—lack of connectivity, hardware failure, battery life, GPS black spots, software bugs, device theft)

- Lack of skills or knowledge by system users, particularly temporary census staff Insufficient or inadequate communication between technology staff and business staff, particularly leading to misunderstanding of requirements

- Hacking, online attack or other information technology security event

- Maintaining, upgrading or decommissioning old or legacy systems

- Lack of documentation or reliance on a small number of key people

- Huge amount of digital data available, creating a potential distraction for staff [3]

A pilot census is an integral feature of the census planning process and a comprehensive test of procedures. Based on best practices and recommendations of the Census Advisory Committee; the overall goal of the 7th Population and Housing Census-2022 Pilot Census was set as follows:

> "To test the effectiveness, applicability and timeliness of the new methodological and organizational procedures such as census training to master trainers and enumerators, census field operation, coordination mechanism between PBS head/regional offices to the provincial/ regional local administration and field staff (PBS field representatives, supervisors/ enumerators), and census manuals and CAPI procedures (hardware especially tablets and software solutions). Also to check efficiency of all the post-enumeration activities, such as the collection and checking of enumeration materials, the Information and Communication Technology (ICT) infrastructure and the entire data processing system."

The overall aim of Pilot Census of 7th Population and Housing Census-2022 has been further sub-divided into twelve specific objectives. The pilot census was aimed at testing the following:

    i.   Effectiveness and comprehensibility of training materials and procedures to instruct the master trainers and enumerators

    ii.   Capabilities of enumerators to comprehend the census concepts within a short span of time and implement in the field with maximum efficiency and accuracy

    iii.   Applicability and suitability of census questionnaire, clarity of its wording, sequence of questions, and response biases

    iv.   The enumeration workload and time required to carry out the enumeration

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[3] "Principles and Recommendations for Population and Housing Censuses" (Revision 3), Department of Economic and Social Affairs, Statistics Division, United Nations, New York, 2017. (Emphasis added)

v.   Suitability of coordination mechanism for logistic support in the field and necessary communication to and from PBS representatives in the field and other field staff such as enumerators/ supervisors etc. to devise effective strategy to deal with day to day issues

vi.   Tablet devices and other hardware for their suitability in the field, especially durability of tablet battery and charge banks to keep devices alive during the whole enumeration time of a day

vii. Census software and GIS for their reliability, accuracy, efficiency and security

viii. Digital block maps with high-resolution imagery and capability to properly identify to the enumerators their assigned blocks and to help recognize block overlapping/ non-coverage etc.

ix.   Compatibility between the hardware and different census software and to sort out issues prior to start of full scale census enumeration

x.   Network availability and proper and easy log-in capability of the devices

xi.   Proper, effective and secure data synchronization and transmission to the central database

xii. Real-time monitoring in the field and at PBS headquarter to deal with block identification/ overlapping, non-coverage and other issues requiring regular and immediate action from the concerned in the field and at PBS headquarter

2.1.2 Committee to Finalize Modalities of Pilot Census

To finalize the modalities of pilot census especially about sampling and field operation for 7th Population and Housing Census-2022, a committee was constituted on 29th March, 2022 (Annex-19) with the following ToRs:

- To determine the sample size, keeping in view the pilot census objectives.
- To select the level of sample, either census district or administrative district.
- To finalize the operation modalities for the pilot census.

Several committee meetings were held to decide on important issues such as time period, sampling methodology, areas identification for electronic vs manual data collection, and enumeration procedure. For the successful planning of the pilot census, the committee also studied pilot censuses conducted by various countries.

2.1.3 Study of Pilot Censuses of Different Countries

Comprehensive studies of different countries in the region/globe were conducted and thoroughly analyzed to devise an effective and efficient design for the pilot census. Many countries chose new technologies and performed pilots to cover a specific percentage of the population to test and execute the complete system to ensure its functioning.

Literature review of many countries reveals that the sampling proportion and frequency of pilots are given, but there is no access to or availability of specific sampling methodology and the process used to select the sample, its percentage, and coverage. According to UN guidelines, at least one pilot census should be conducted before employing cutting-edge

technology, tools, and techniques in census.

However, according to the local geographical and social dynamics, each country selected a sample for a pilot census to test different aspects of the digital census. The primary purpose of the pilot for the digital census is the testing of digital data collection system in diverse geographical and social environments. Here is a brief description of the pilot census conducted by other countries.

I.   Iran Pilot Census 2016

Iran conducted two pilot census before conducting a digital population census. The first pilot was conducted in two cities in 2014: Shar-e-Majlesi and Foolad Shahr. Both pilots were developed and designed in such a way that the results were tested. All flaws were identified at every stage so that they could be detected and removed promptly and precisely. In 2015, the second pilot census was conducted. It was carried out using a combination of online and face-to-face interviews.

II.   Turkey Pilot Census 2011

Turkey organized the pilot census for the 2011 Population and Housing Census in October 2010. The pilot was designed to test various new aspects of the census operation, including the questionnaire, the enumerator manual and related documents, and the data processing stages. It was carried out by 26 Turk Stat regional offices in 214 localities (81 provinces, 81 district centers, and 52 villages) and 275 enumeration areas, with approximately 50,000 households enumerated. During the process, the household questionnaire, the questionnaire for institutional settings, and the questionnaire for homeless people were tested.

III. Egypt Pilot Census 2017

Egypt 2017 Population, Housing, and Establishments Census was conducted electronically for the first time, and included census counts for population, housing, building enumeration, and establishments. The Central Agency for Public Mobilization and Statistics (CAPMAS) conducted five pilot census prior to the full coverage. The first census test was conducted in 2013 and covered 8,000 households in two governorates (Cairo and Kalyubia). The second test was conducted in 2013-2014 and included 37,000 households from three governorates (Ismailia, al Gharbia, and Fayoum).

Third test was carried out in 2014-2015 and covered a total of 100,000 households in 10 Governorates. The fourth census test began in September 2015 and was completed in January 2016. It reached approximately 23,000 households in two governorates (Kalyubia and Assuit). The fifth census test was carried out in the field from July 10th to September 5th, 2016 in all governorates. It was spread across 769 regions and 18,200 units. The electronic software application was tested for all phases (preparation: determining work areas; drawing, matching, and modifying geographical maps; counting units and buildings; counting population and housing conditions using two questionnaires (short and long); counting public housing; and counting establishments).

IV. Bangladesh Pilot Census 2021

The first multimodal census pretest was held from October 5 to 10, 2016. From each division of the country, eight Enumeration Areas (EA) of the population census-2011 were chosen for Multimodal Census, including the newly declared Mymensingh Division. Four of the eight EAs worked in cities, while the other four worked in rural areas. The households were first listed, and then questionnaires were distributed to them. The total number of households obtained in the pre-test was 821.

V. Pakistan Pilot Census 2008

Pakistan conducted pilot census in 2008 in 100 administrative districts with 2 blocks each (1 urban and 1 rural block) to test the logistics distribution channel and enumeration procedures. The comparative studies of countries are presented in Table 2.1.

Table 2.1: Comparative Study of Different Countries for Pilot Census

Country Name	No of Pilot Census	Coverage	% Households for Pilot
Iran-2016	2	2 cities	
Turkey-2011	1	250 blocks (50,000 households)	0.15 %
Egypt-2017	5 (one main)	All Governates (87,000 households)	0.29 % for 5 Pilot
Bangladesh-2021	1	8 blocks	1 %
Pakistan -2008	1	100 Administrative districts (2 blocks from each district, one urban and one rural)	1 %

2.2   Methodology of Pilot Census

The Census Advisory Committee (CAC) recommended that a Pilot Census be conducted to test the entire procedure. PBS initiated and completed the Pilot Census preparations, which included staff deployment, establishing support centers, and creating training manuals and materials. A pilot census of population and housing census-2022 was conducted in 33 selected administrative districts across Pakistan, including Azad Jammu and Kashmir and Gilgit Baltistan. The Master Trainers received three days of training at PBS headquarters from July 5th to 7th, 2022, while the enumerators received training in the field from the Master Trainers at the selected 27 stations from July 13th to 17th, 2022.

The enumeration and supervisory staff were provided by the district administration of each province and district. The enumerators were deputed from various provincial departments and the enumeration was completed under the supervision of the tehsil and district administration

of the concerned jurisdiction. The pilot census was enumerated using tablet devices; as a digital census, two software modules were prepared and used for this exercise.

2.2.1 Sampling Methodology

The PBS technical committee reflected on the methodology, which was based on comparative studies of different countries and took into account Pakistan's ground realities. Initially, it was planned to choose two blocks from each census district (tehsil/district), for a total of 1000 blocks from 489 census districts, or to choose two blocks from each admin district (156 districts), i.e. 312 blocks.

Option 1	Option 2
• Two blocks from each Admin. district (156) • One urban & one rural • Total blocks = 312	• Two blocks from each Census district (489) • Total blocks = 1000

Figure 2.1: Initial Proposed Sample Size for Pilot Census

The proposed sample size was presented to the technical committee, on which a detailed discussion was made. The decision was made unanimously to choose a sample from groups of districts rather than a representative sample from each district, keeping in mind the objective of the pilot census, which involves a thorough test/run of all technologies used. For this purpose, a detailed study was conducted on the block-by-block information collected by field services and support services about various characteristics. After much consideration, it was agreed to select a sample of no more than 500 blocks based on area characteristics as this number covers diversity in socioeconomic characteristics across district/regions of Pakistan. The technical committee decided that there is no need for results to be representative since the primary goal of pilot is the system functioning and not the geographical coverage.

Sample Selection for Pilot Census

In light of the recommendations, the detailed study was carried out for sample areas having different characteristics i.e. topography (plain, river side residential blocks), accessibility, population density, area density, electricity and internet connectivity etc. The technical committee examined the block-by-block information collected by the field services and support services sections about certain parameters in the area frame as updated by census 2017. The following characteristics were found in the frame for each block.

- Block area and type
- Issues approaching block (Accessibility)
- Estimated distance from district headquarters
- Conveyance type from district headquarters to the block
- Access/Approach within the block

It was decided that the sample for the pilot census would be selected from the clusters, which would be formed based on various characteristics such as density, type, etc.

Selection of Districts for Pilot Census

The selection of districts for the Pilot Census could be made subjectively, but PBS determined criteria based on the ground realities. The following four steps were adopted for this purpose.

Step-1: Consideration of Block Parameters

For the selection of a sample for pilot census, initially the following three parameters were considered from a complete frame, which have different characteristics such as: block area, block type, issues approaching the block, electricity and computer/Internet.
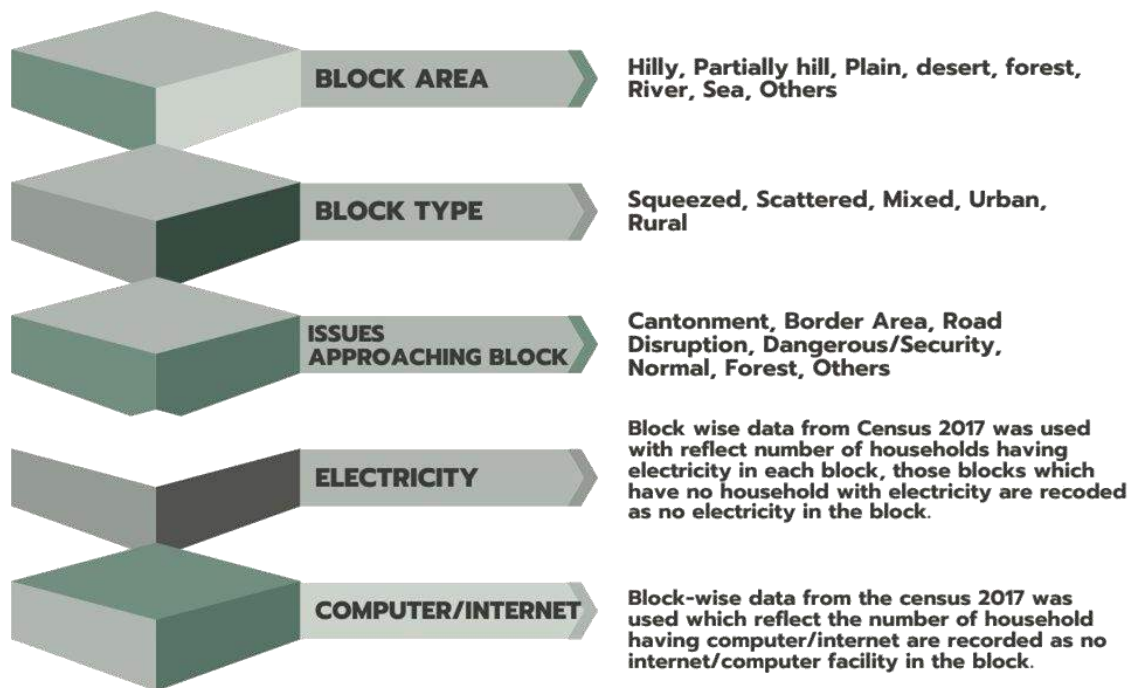
BLOCK AREA → Hilly, Partially hill, Plain, desert, forest, River, Sea, Others

BLOCK TYPE → Squeezed, Scattered, Mixed, Urban, Rural

ISSUES APPROACHING BLOCK → Cantonment, Border Area, Road Disruption, Dangerous/Security, Normal, Forest, Others

ELECTRICITY → Block wise data from Census 2017 was used with reflect number of households having electricity in each block, those blocks which have no household with electricity are recoded as no electricity in the block.

COMPUTER/INTERNET → Block-wise data from the census 2017 was used which reflect the number of household having computer/internet are recorded as no internet/computer facility in the block.

Figure 2.2: Parameters for Selection of Districts for Pilot Census

Step-2: Recoding of Variables

In this step, for better understanding and meaningful analysis, ranking of various variables was adopted to get numerical values.

Block Area	• Hilly/Partially Hilly = 1 • Plain = 2 • Desert/Forest/River/Sea/Others = 3
Issues Approaching Block	• Economically strong/ Normal = 1 • Cantonment/Border/Road Disruption/Dangerous/ Security Issues = 2
Electricity and Computer/ Internet	• Eelectricity (Yes) and Computer/Internet (Yes) = 1 • Electricity (Yes) and Computer/Internet (No) = 2 • Electricity (No) and Computer/Internet (No) = 3

Figure 2.3: Recoding of the Variables for Pilot Census

Step-3: Frequency of Characteristics

A detailed analysis was performed, and variations in the blocks for block type, block area, and issues approaching blocks by province, region, and district were examined. Following the analysis, cross tabulation was performed, and districts with high frequencies of identified characteristics in various combinations were selected.

Step-4: Selection

• Selection of Districts

Districts with an urban/rural breakdown were selected after considering a combination of different characteristics. Districts were selected where the highest number of combinations of characteristics within a district in each stratum, i.e., province, were observed. In Punjab, sub-stratification of regional distribution (South Punjab, Central Punjab, and North Punjab) was also considered to have a representation of all regions of Punjab. If two or more districts have the same number of combinations of characteristics, in that case, only one district was selected.

• Selection of Charge

Charges were selected randomly within each selected districts.

• Selection of Circle and Blocks

Blocks were selected within the selected charges manually but it was ensured that two adjacent blocks in a circle be selected to check the overlapping issues. Further sample may also include rural/urban areas along with characteristics of different geographical scenarios.
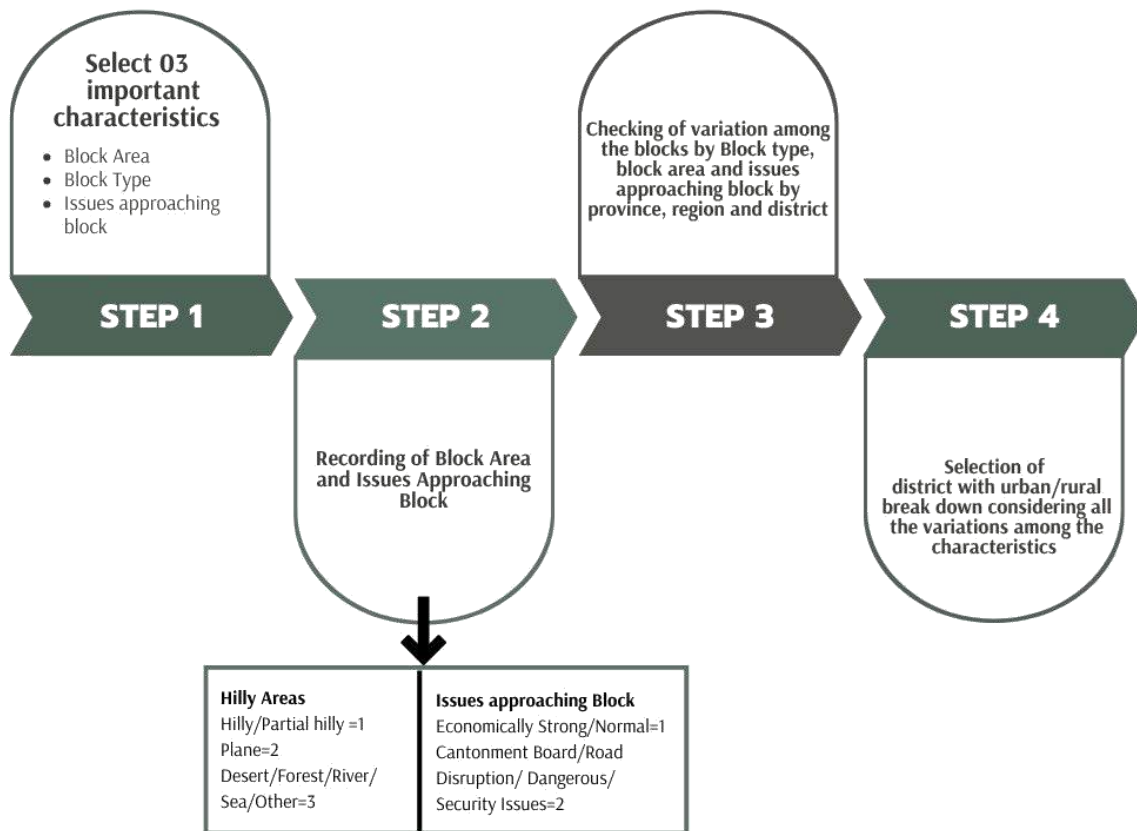
Figure 2.4: Steps for Selection of Districts for Pilot Census

However, keeping in view the requirements of the pilot census, Kohistan and South Waziristan from Khyber Pakhtunkhwa, Karachi East, Karachi Central (for high rise buildings), Tharparkar from Sindh and Washuk from Balochistan were selected by using a purposive sampling technique. Accordingly, 34 districts were chosen from across Pakistan, with 423 sample blocks from Azad Jammu and Kashmir and Gilgit Baltistan. However, due to some administrative reasons, it was decided to drop South Waziristan. Therefore, the sample was reduced to 33 districts, comprising of 417 blocks. The selected administrative districts for the Pilot Census can be seen in Figure 2.
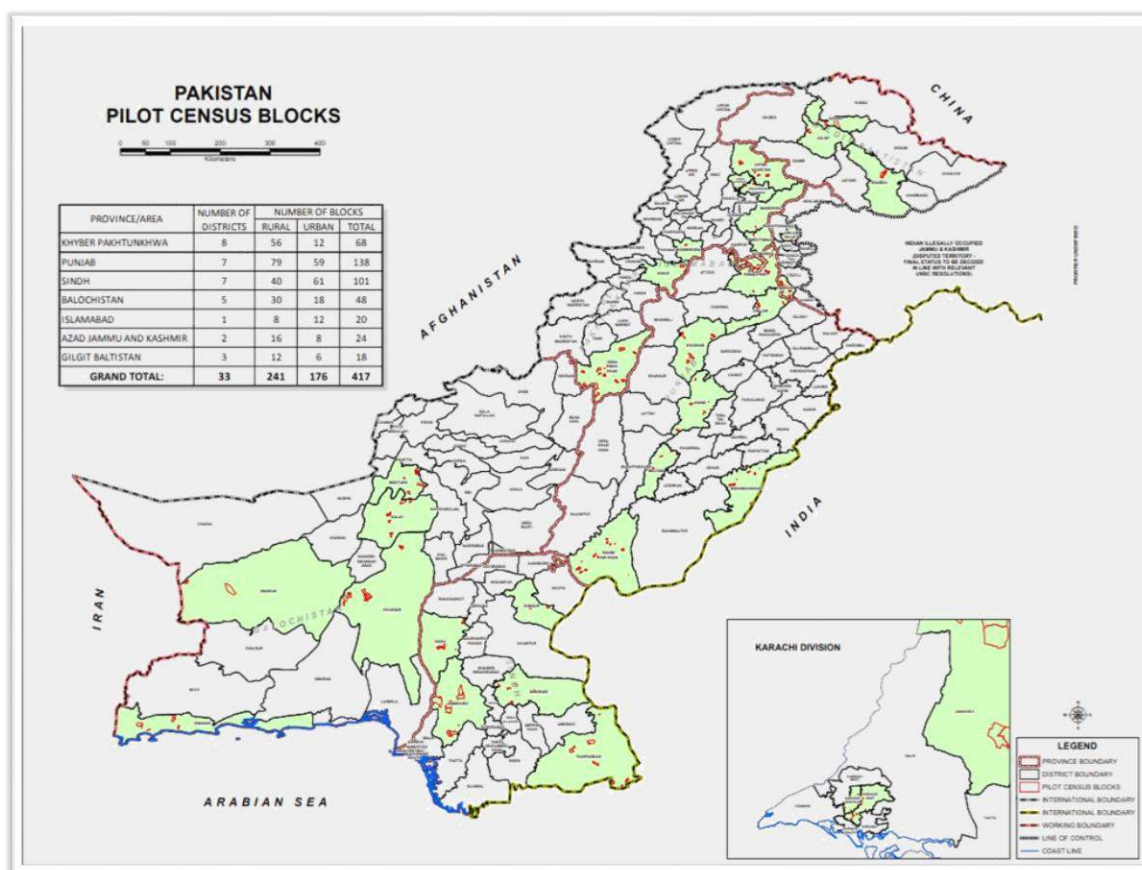
Figure 2.5: Map Showing Administrative Districts Selected for Pilot Census Enumeration

The rural/ urban breakdown and province/ district-wise selection of blocks for the pilot census are given in Figure 2.6 and Table 2.2, respectively.
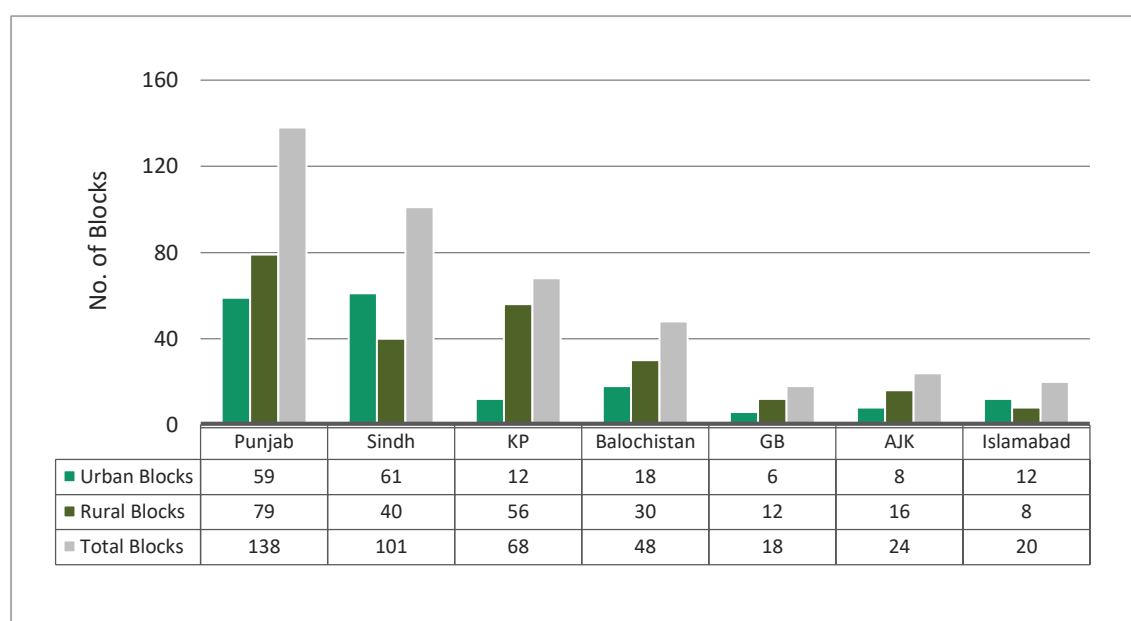

	Punjab	Sindh	KP	Balochistan	GB	AJK	Islamabad
■ Urban Blocks	59	61	12	18	6	8	12
■ Rural Blocks	79	40	56	30	12	16	8
■ Total Blocks	138	101	68	48	18	24	20

Figure 2.6: Rural/ Urban Breakdown of Blocks Selected for Pilot Census

Table 2.2: Province-/ District-wise Blocks Selection for Pilot Census

Province/ Region	Selected Districts	No. of Blocks	Visual Presentation of No. of Blocks Selected from a District
Islamabad	Islamabad	20	
Punjab	Bahawalnagar	16	
	Rahim Yar Khan	36	
	Jhang	16	
	Multan	20	
	Jhelum	12	
	Rawalpindi	26	
	Khushab	12	
Khyber Pakhtunkhwa	Dera Ismail Khan	24	
	Abbottabad	4	
	Mansehra	4	
	Lower Kohistan	8	
	Upper Kohistan	12	
	Kohistan	8	
	Kohat	4	
	Nowshera	4	
Sindh	Dadu	12	
	Jamshoro	18	
	Karachi Central	16	
	Karachi East	21	
	Tharparkar	14	
	Sanghar	16	
	Sukkur	4	
Balochistan	Kalat	10	
	Mastung	8	
	Khuzdar	14	
	Washuk	4	
	Gwadar	12	
Azad Jammu and Kashmir	Jhelum Valley	8	
	Mirpur	16	
Gilgit-Baltistan	Baltistan	4	
	Gilgit	8	
	Nagar	6	
Total		417	

2.2.2 Census Software Modules

NADRA and PBS had agreed on sixteen different software modules for the *'digital'* 7th Population and Housing Census-2022. However, due to time constraints and other limitations, eight core modules including the 'Self-enumeration web portal' and 'GIS based dashboard monitoring system' were prioritized for the testing and evaluation. The eight prioritized modules for the Pilot Census are given in Table 2.3.

Table 2.3: Software Modules Prioritized for Pilot Census

S. No.	Module	Description	Remarks
1	Self-enumeration web portal	Individual can enumerate himself using web-portal.	Not provided by NADRA
2	HR & task assignment web portal	Web based portal for HR & task related tasks.	Not provided by NADRA
3	Inventory management	Application for inventory management related tasks.	Not provided by NADRA
4	House listing application	Android based application for house listing.	Used in Pilot Census and evaluated.
5	Enumerator data collection application	Android based application for enumeration.	Used in Pilot Census and evaluated.
6	Area frame update application	Application update of area frame in interactive manner.	Not provided by NADRA
7	GIS based dashboard monitoring system	Web based dashboard for monitoring of census progress.	Not provided by NADRA
8	Dashboard for trend analysis	Application for real time trend analysis on area level.	Not provided by NADRA

From these eight modules, NADRA developed and provided only two modules (i) House listing application and (ii) Enumeration application.

These modules were effectively used and tested in Pilot Census-2022. These modules are android based application and contains following features:

- Device permissions identification and implementation
- Import of assigned area blocks, area's imagery and digitized block boundaries and GIS based geo-tagging, implementation of live geo-fencing
- Census listing questionnaire fields entry submission and synchronization on server
- Offline mode support (for household data and GIS points – tracking and tagging)
- Backup and restore, automate backup sync, automate logs upload to server
- Alerts and notification, user log maintenance, work progress status
- Data validation/editing support before submission of data
- Auto update App in case of new version through MDM

I. House Listing Application

This is an android based application designed for collecting information about head of house hold, location, type of structure, household and type of unit (residential, economic), number of persons working in economic units etc. Figure 2.7 shows the workflow of listing of structures application.
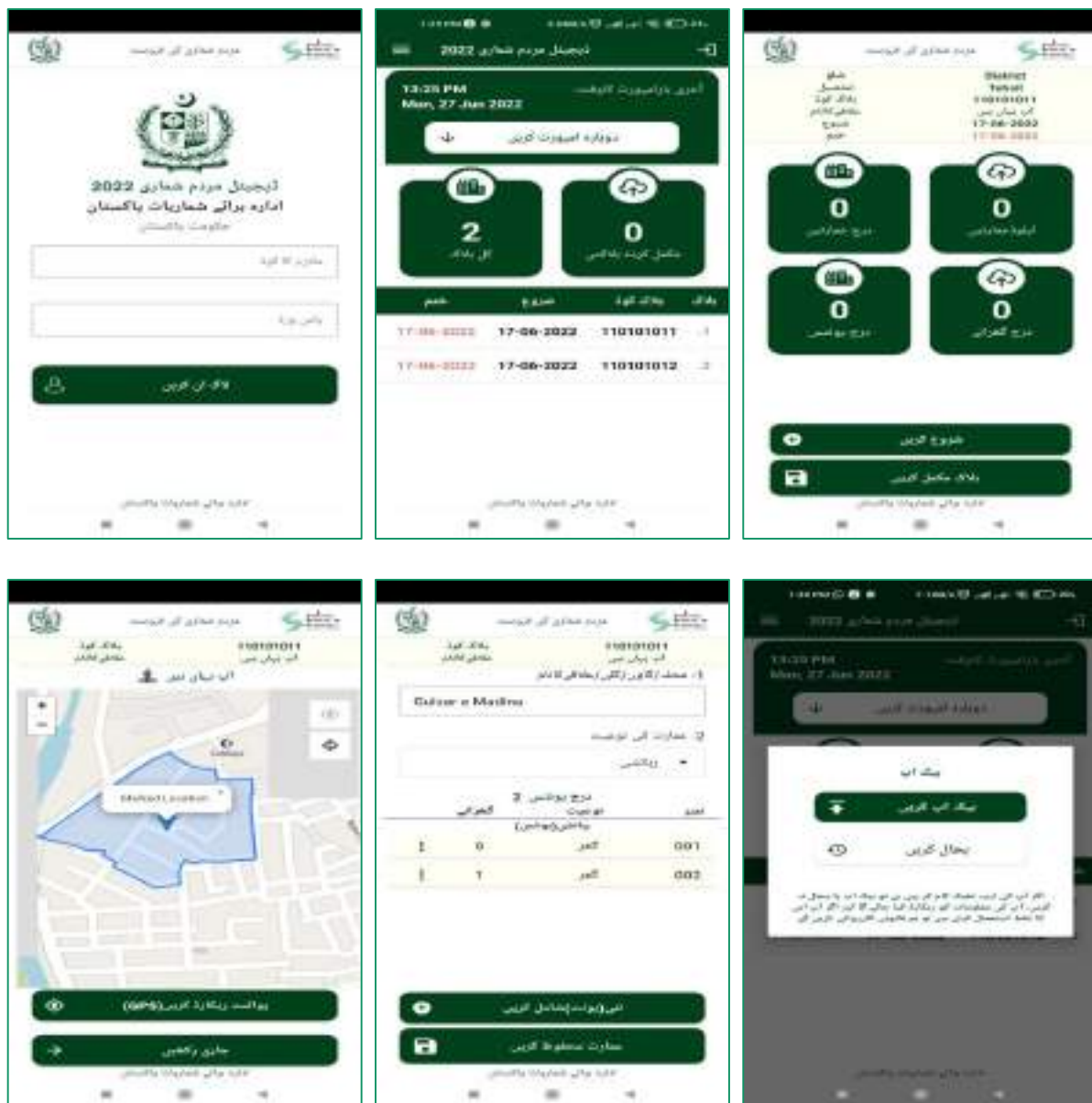
Figure 2.7: Tablet-based House Listing Application

II. Enumeration Application

This is an android based application designed for personal interview to collect information for census listing questionnaire fields' entry. Figure 2.8 shows the workflow of housing and demographic enumeration application.

Figure 2.8: Tablet-based Housing and Demographic Enumeration Application

2.2.3 Hardware (Tablets and Allied Accessories)

According to the contract, NADRA, as a consultant on this project, was responsible for providing, preparing, and dispatching new tablet devices and allied accessories in accordance with the contract specifications (Annex-20). However, NADRA provided 554 used tablet devices for the pilot census. NADRA was also in charge of providing SIM card/internet devices for tablet device connectivity. They provided SIM cards, but because no prior work comparable to network connectivity in the enumeration areas had been done, the SIMs did not work in some areas. PBS planned the preparation in different stages and the brief detail of preparation activity is described in Table 2.4

Table 2.4: Brief Detail of Preparation Activity for Hardware

Phase	Operation	Details
Phase - I	Basic operations/Inventory management	Receiving, unpacking of tablets Tagging for records keeping Checking of accessories/ battery charging
Phase - II	Synchronization of software updates	Connecting with internet Listing/enumeration software update Testing through user login etc.
Phase -III	Distribution at various districts	Distribution of tablet Devices Dispatching to stations/ districts

2.2.4 Datacenter and Infrastructure

According to the agreement, NTC was responsible for the establishment of two physical sites: one physical production site at NTC's Islamabad Datacenter and one physical disaster recovery site at NTC's Lahore Datacenter, with all infrastructure services including compute, storage, load balancer, firewall, network equipment, and licenses on a rental basis at both sites.

NTC is in the process of establishing a call center in PBS; however, for the use of the pilot census, temporary arrangements for six call center representatives were made in NTC's existing call center infrastructure. The purpose of the temporary arrangements was to gain hands-on experience for the overall operational understanding of the call center.

2.2.5 High Resolution Imagery

As per the agreement with SUPARCO, they were responsible for providing two modules, i.e. (i) provision of VHR Satellite Imagery and (ii) technical services, which include establishing image service architecture in PBS premises and capacity building of PBS personnel. However, SUPARCO provided only 267 block images on 29th July 2022, amid the pilot census. Due to the non-availability of block images from SUPARCO, the pilot census used open street maps.

2.2.6 Technical Support during Pilot Census

PBS has signed a contract with NADRA to provide hardware and software on a turnkey basis. As per the agreement, NADRA was also responsible for providing technical support during the training and at the district level to the PBS/ enumerators and supervisors field staff. So, during the field operation, NADRA was responsible for providing the required support.

2.2.7 Trainings of Master Trainers and Enumerators

From July 5th to 7th, 2022, PBS HQ Islamabad hosted Master Trainer training for the pilot census. After training, the Master Trainers trained 954 field staff (enumerators, supervisors, and PBS representatives) in 27 batches at 25 administrative districts (Annex-21). Each batch

was prepared by a pair of trainers, one from the subject matter and one from the IT department. The venues arranged for the training selected for the pilot census are given in Table 2.5. A few pictures from the training sessions are shown in Figure 2.9.

Table 2.5: Venues Arranged for Training of the Field Staff

Province/ Region	Venue	Province/ Region	Venue
Islamabad	Islamabad	Sindh	Dadu
Punjab	Bahawalnagar		Jamshoro
	Rahim Yar Khan (I&II)		Karachi Central
	Jhang		Karachi East
	Multan		Tharparkar
	Jhelum		Sanghar
	Rawalpindi		Sukkur
	Khushab	Balochistan	Kalat
	D.I.Khan (I & II)		Khuzdar
Khyber Pakhtunkhwa	Abbottabad		Gwadar
	Kohistan	Azad Jammu and Kashmir	Mirpur
	Peshawar		Jhelum Valley
		Gilgit-Baltistan	Gilgit

Table 2.6 lists the topics and contents covered during Master Trainer and field staff training for pilot census field operations.

Table 2.6: Topics Covered for Training of Master Trainers and Field Staff

S. No.	Topic	Contents
i.	History and introduction of digital census	• Introductory session of Census-2022 • Importance of feedback of enumerators to improve final activity • Inventory and distribution of tablets • Appointment of staff (HR) • Area frame • GIS field monitoring
ii.	Listing (Conceptual/Practical on Tablets)	• Structure number (Q1) and identification of structure (Q2) • Type of Unit (Q3) • S. No. of house/ commercial unit / household (Q4, Q5, Q6) • Name of head and phone number (importance of phone number) (Q7, Q8) • Household economic activity (difference between household economic activity and other economic activity) (Q9) • Number of employees and PSIC code of Economic Activity (Q10, Q11)
iii.	Questionnaire (Conceptual/ Practical on Tablets)	• Dejure definition (Who will be covered and where will be covered)

S. No.	Topic	Contents
		• Basic questions, education, employment, migration, functional limitation (disability), housing (Q1 to Q8)
iv.	Supervisor/Trend Dashboard	
v.	Mock exercise	• Team wise • Each team lead by PBS representatives (Officers/Official) • Explained them this is testing and to get their feedback on control form

Control Forms Preparation:

Six control forms were created for the Pilot Census: one for additional staff needs (Control Form-GIS), one for field operation issues (Control Form-FS), one for IT issues relating to enumeration applications, listing applications, and training evaluation (Control Form-IT-E, IT-L, & IT-T), and one for questionnaire feedback (Control Form-Sub Matter). The details are given in Table 2.7.

Figure 2.9: Training of Master Trainers for the Pilot Census Field Activity

Table 2.7: Detail of Control Forms Used in Pilot Census

S. No.	Forms	When filled	To be Filled by	Remarks/ description	Annex
1	Control Form (GIS)	During conduct of Pilot Census	Charge/Circle Supervisor	For additional staff requirement for big blocks before start of enumeration	Annex-22
2	Control Form (FS)	After Pilot Census	Circle Supervisor/ Charge Superintendent and Enumerator Fill the form and then hand over to SA posted at respective stations for submission to HQ.	Issue observed during the field operation	Annex-23
3	Control Form (IT-E)	Filled in two stages i. Mock exercise ii. Pilot Census	i. Enumerator will fill and then hand over to Master trainer and then Master trainer will be responsible to send to HQ. ii. Circle/Charge Supervisor fill the form and then hand over to SA posted at respective station to submit to master trainer/HQ.	Feedback regarding enumeration application	Annex-24
4	Control Form (IT-L)	Filled in two stages i. Mock exercise ii. Pilot Census	i. Enumerator will fill and hand over to Master trainer who will be responsible to send to HQ. ii. Circle/Charge Supervisor fill the form and then hand over to SA posted at respective station to submit to master trainer/HQ.	Feedback regarding house listing application	Annex-25
5	Control Form (IT-T)	After getting training	Must be filled all trainees and handover to master trainer for submission to HQ.	Training evaluation after getting training	Annex-26
6	Control Form (Sub Matter)	After getting training	Must be filled by: i. Master Trainer/ Trainer ii. Charge/Circle Supervisor iii. Field Enumerator	Questionnaire related feedback	Annex-27

2.2.8 Field Operation

A pilot census was conducted in 33 selected administrative districts, including Azad Jammu, Kashmir, and Gilgit Baltistan, from July 20th to August 3rd, 2022. For the initial enumeration, 429 blocks were chosen. Due to security and other concerns, 12 blocks from census districts Haveli and South Waziristan were later removed. From 417 blocks, 368 blocks were fully enumerated, while enumeration in the remaining blocks could not be completed.

I.   Characteristics of Enumerators

PBS deployed one enumerator for each block with 5% reserved staff and one tier of supervisory staff, i.e., charge superintendents, to complete the process. Different characteristics of enumerators employed for census field duty are shown in Figure 2.10.

**Enumerators Having Basic
IT Backgorund**

**Enumerators Having Previous
Census Experience**

Age Distribution of Enumerators

Gender of Enumerators

Figure 2.10: Different Characteristics of Enumerators Employed for Pilot Census

II. Enumeration

In the field, enumerators were responsible for completing one block within a time span of fifteen days. The given days were further divided as follows: the first three days for the listing of structures; the next ten days for enumeration; one day to enumerate leftover structures or households; and one day for the homeless population. Some pictures from the Pilot Census field enumeration are shown in Figure 2.11.

Figure 2.11: Field Enumeration at Different Places during Pilot Census

III. Progress of Field Work

For Pilot Census, 417 blocks were selected for enumeration. At the initial stage of the field operation. Three blocks each from districts Washuk, Cholistan and Islamabad were removed due to flood/rain, non-availability of a 4×4 vehicle and non-availability/ replacement of enumerator, respectively. Out of the remaining 414 blocks, 368 (88.9%) have been fully enumerated, while work in 46 (11.1%) could not be completed due to various factors such as rain, large blocks, delays in tablet device delivery, battery drainage issues and map-related issues. Only 60% of the enumeration work in the remaining 46 blocks was completed. Province-wise breakdown of completed and remaining blocks is given in Figure 2.12.

	AJK	Balochistan	GB	Islamabad	KP	Punjab	Sindh
■ Blocks Remaining	3	1	0	12	2	19	9
■ Blocks Completed	21	46	18	7	66	118	92
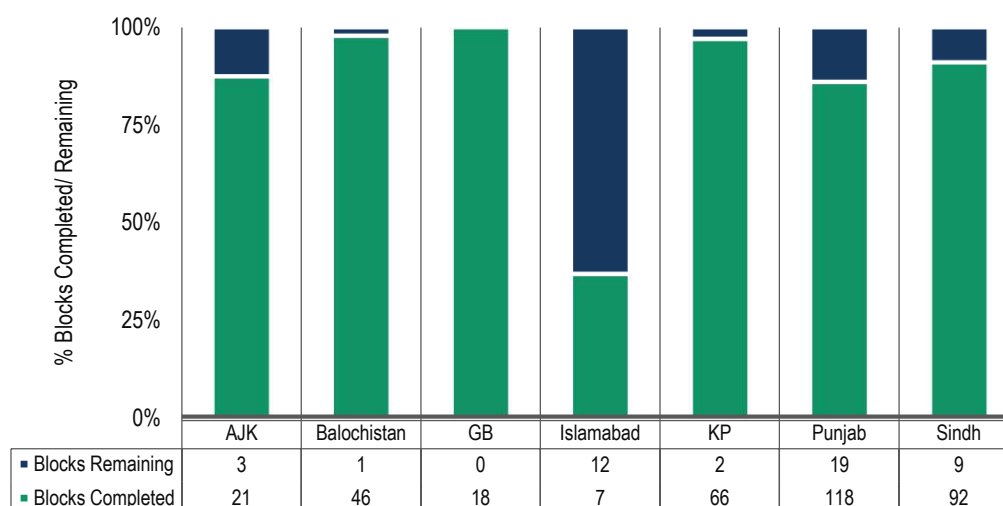
Figure 2.12: Number and Percentage of Blocks Completed.

The reasons for incomplete work in 46 remaining blocks along with the districts are covered in Table 2.8.

Table 2.8: Reasons for Incomplete Field Work in 46 Blocks

No. of Blocks	Reasons for Incomplete Field Work	District
7	Rain	Mirpur, Islamabad, Jamshoro, Dadu, Washuk, Karachi
10	Big blocks	Islamabad, Gwadar, Rawalpindi, Jehlum, D.I.Khan
29	• Delay in provision of tablets • Charging/ battery drainage issue • Connectivity issues • Map related issues • Poor response due to non-cooperation of respondents • Transportation problems	Gwadar, Kohistan, Kalat, Tharparkar, Karachi East, Islamabad.
Total 46	Almost 60% of the work had been completed in the 46 blocks	

2.2.9 Security of Field Staff

During the field operation of pilot census, more than seven thousand personnel from Armed Forces, Civil Armed Forces (CAF), and Police were deployed in 33 administrative districts. Security was ensured for the field staff and other officials who visited the enumeration areas for coordination, logistics, and checking purposes.

One hundred and fifty Quick Reaction Force (QRF) centers were established for the Civil Armed Forces and Pakistan Army to work as 2nd tier and 3rd tier responders, respectively, to create a secure enabling environment for the census process. Out of total 7107 security personal, 1736

were deployed in Punjab, 2721 in Sindh, 1238 in Khyber Pakhtunkhwa, 326 in Balochistan, and 976 in Islamabad (ICT), Azad Jammu and Kashmir and Gilgit-Baltistan. Further detail can be seen in Table 2.9 and shown in Figure 2.13.

Table 2.9: Manpower Employed for Field Security Purpose

Province/ Region	No of QRF Centers	Army	Civil Armed Forces	Police	Total
Punjab	40	916	-	820	1,736
Sindh	36	711	744	1,266	2,721
Khyber Pakhtunkhwa	26	588	-	650	1,238
Balochistan	15	41	196	89	326
ICT / AJK / GB	33	654	-	322	976
Total	150	3,020	940	3,147	7,107
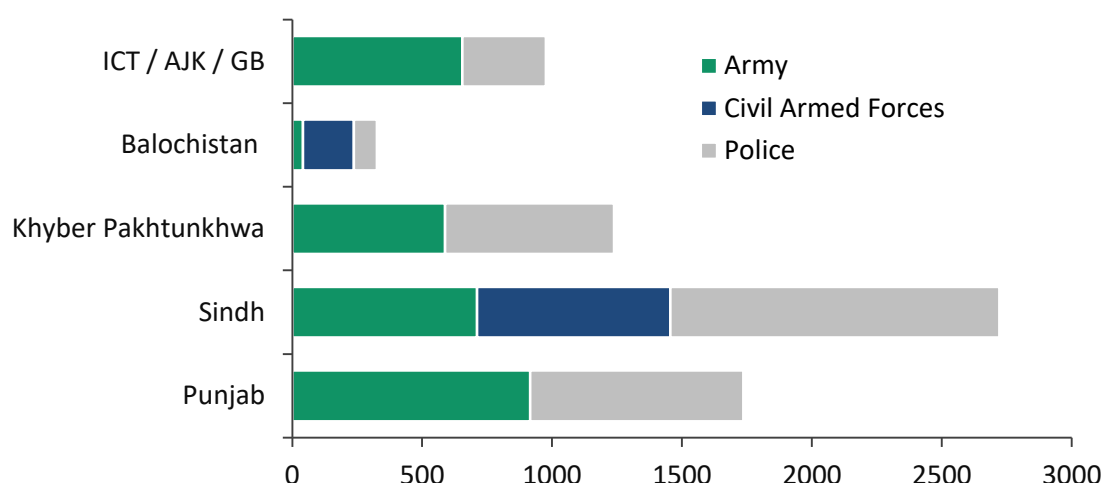
Figure 2.13: Army, CAF and Police Personal Deployed for Security of Census Staff

2.2.10   Field Monitoring

PBS monitoring teams visited the pilot census field areas from July 25th to 30th, 2022, to monitor the field operation. Each monitor visited two blocks, collected at least three questionnaires from households, and completed the monitoring form (Annex-28) for each block per the issued SOPs (Annex-29). The objective of the field operation monitoring was twofold: to check the quality of data collection and to conduct a more thorough investigation of challenges identified during the field operation. A few pictures from field monitoring of pilot census by the PBS staff are given in Figure 2.14.

Figure 2.14: Field Monitoring by PBS Staff during Pilot Census

Chapter 3
Evaluation of Pilot Census

Chapter 3: Evaluation of Pilot Census

This chapter is the actual evaluation of the pilot census highlighting the primary purpose of this report. Significant issues related to various activities have been elaborated in light of detailed discussions regarding procedures and field enumeration in Chapter 2. Case studies have also been devised to realize the existing ground realities for the critical situation. Various issues have been explained in detail through a situation analysis.

The purpose of conducting the pilot before the actual census was to evaluate all aspects of the census operation- from the acceptability of the data collection application to the enumeration procedures and data processing stages. Unlike field tests, which are limited to testing the collection application and mode of data collection, the pilot census aims to test all systems and their interoperability. During the pilot, all the adopted organizational and technological assumptions must be verified, along with the procedures' accuracy and the instructions' clarity. *The pilot census also enables the testing of all applications used for data collection and the entire management application.* The management application's functionality must ensure the monitoring of the census' progress along all data collection channels.[4]

For reporting and evaluating every aspect of the pilot census, different control forms were designed for additional staff needs, challenges with field operations, feedback on enumeration applications, training feedback, and questionnaires. The pilot census was assessed and evaluated utilizing data and feedback from the PBS headquarters Complaints Management System, control forms, PBS field employees deployed in Census Districts, and monitoring teams assigned to investigate problems and difficulties in the field alongside enumerators and supervisors.
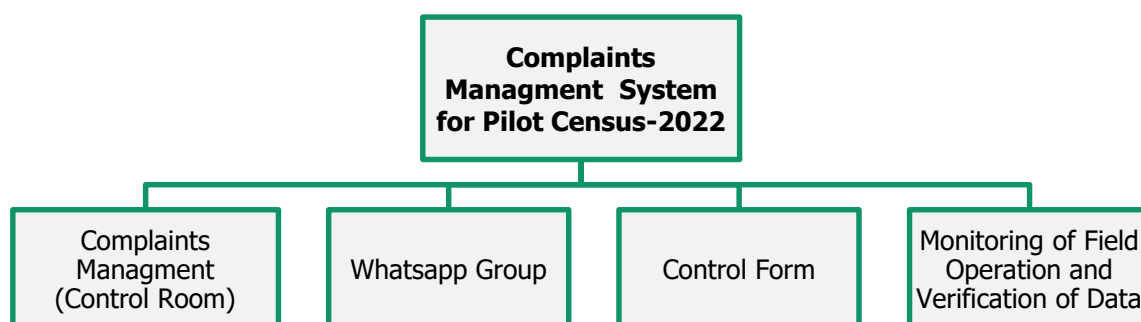
Figure 3.1: Complaints Management System for the Pilot Census

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[4] "Guidelines on the Use of Electronic Data Collection Technologies in Population and Housing Censuses," Department of Economic and Social Affairs, Statistics Division, United Nations, New York, 2019. [Emphasis added]

The pilot census was evaluated by analyzing the issues and problems that surfaced in the following categories. Based on these issues, recommendations have been made, and a way forward for the full implementation of the 7th Population and Housing Census-2022 is proposed in the following chapter.

  i. Administrative and human resources
  ii. Coordination and communication mechanism
  iii. Trainings related problems
  iv. Conceptual and questionnaire related problems
  v. Census hardware and software
  vi. GIS and map
  vii. Field services and security

3.1 Administrative and Human Resources Related Issues

Efficient human resource and inventory management is essential for the successful field operation of a pilot census and full population and housing census rollout. However, the digital system designed for the 7th Population and Housing Census-2022 could not be tested prior to and during the Pilot Census to ensure accuracy, efficiency, and reliability.

I. Non-provision of HR Management Module

HR Management was one of the main modules prioritized for pilot census as it required registering and verifying the field staff, i.e., charge superintendent, circle supervisor, and enumerators. The module is also helpful for staff replacement during the process, but NADRA only focused on listing and enumeration applications. As a result, PBS developed an in-house manual system for HR management and data sharing with NADRA, which was time-consuming.

II. Non-provision of Inventory Management Module

The pilot census also prioritized a module called "Inventory Management." However, NADRA did not complete it for testing. Therefore, PBS used Excel spreadsheets to manage the inventory and carried out the task of distributing and shipping the tablet devices.

III. Non-provision of Mobile Device Management (MDM) Module

The enumerators' tablet devices can be remotely managed through a module called Mobile Device Management (MDM), which allows the control of the tablet devices, applications update, provisioning of new images, reporting of events, and the resolution of crashes and exceptions. Because NADRA did not authorize PBS to use MDM, problems with managing tablet devices and user logins could not be addressed right away.

3.2   Coordination and Communication Issues

A successful population and housing census with complete coverage requires effective and efficient coordination and communication mechanisms. But a number of problems with coordination and communication were reported during the field operation of pilot census.

3.2.1 Improvised Communication Mechanism

NADRA was responsible for providing the communication mechanism before the pilot census, as the module for the communication mechanism was part of Census ERP. But due to time constraints, this module could not be tested. Furthermore, call centers were supposed to be set up and tested but could not be established.

Since no communication mechanism was in place to manage issues, complaints, and progress, PBS established a control section before the start of the pilot census. The control section was established on 20th July 2022, on the first day of the pilot census field operation, to manage the complaints of the field staff. Control forms were designed and circulated for effective complaint management and reporting. Alongside, statistical assistants in PBS were assigned the duties of connecting with the census coordinators via phone calls/ WhatsApp to maintain records of complaints and for their timely solution of issues.

A temporary call center was also established at NTC premises and was only available for testing after the listing operation of the pilot census. It was observed that the system was not mature, and the call center staff was not trained enough to manage the complaints received from the field, resulting in inefficient management and delayed resolution of complaints. Access to the call center *Complaint Resolution Portal* was limited to the intranet. Complex configuration was required to give access to PBS but NADRA complaints resolution teams were not experienced enough to do it, which caused further delays in the complaints resolution process.

Due to the absence of a coordination mechanism, PBS established WhatsApp groups for Master Trainers, PBS field staff, and 27 groups of enumerators. NADRA created a separate WhatsApp group to address IT-related issues. This lack of communication mechanism was felt strongly, as improved daily communication and coordination across all teams were required. Furthermore, due to the lack of a proper communication system, complaints about software applications were first communicated to PBS officials via the WhatsApp group and then to NADRA officials. This lengthy communication system delayed the resolution of the issues by one to two days.

Figure 3.2: Snapshot of a WhatsApp Group Communication during Pilot Census

A Case Study is discussed below regarding the uploading of household data in Balochistan.

Case study regarding uploading of household data:

On August 2, 2022, the Incharge Quetta Regional Office received a report from Ormara Tehsil about non-uploading data from tablets devices. Only a few households' data were uploaded to the server. The problem persisted for the remaining data until the next day, the last day of the pilot census. Even after PBS's constant pursuit, the matter remained pending for the entire day until NADRA support representatives resolved the issue on August 3rd, 2022. PBS found out later that this problem was caused by the fact that all of the tablet devices had the wrong VPN settings.

IT Staff at Census Support Centers

Census Support Centers (CSCs) have been established at the census district level to perform the control room and complaint inquiry office functions. The NADRA staff deputed at CSCs was responsible for handling problems related to census hardware and software. But they were not competent enough to handle any such situation. Therefore, during pilot census, PBS had to depute its IT staff at CSCs for a week.

3.2.2 Real Time Monitoring and Progress Management System

Regular, often immediate, feedback can help to resolve technological and field-related problems in a timely fashion, resulting in improved coverage and data quality. A rigorous monitoring system is crucial for collecting complete and accurate census information. Given the complexity and the hierarchical structure of census enumeration and the associated

delineation of responsibilities in the field, *electronic data collection programs must provide comparable sets of tools for enumerators, supervisors and managers* to employ in the management of their work. [5]

For the pilot census, NADRA was responsible for providing all the essential modules, including a dashboard for real-time monitoring and progress management. The modules, however, could not be completed on time and therefore could not be tested in pilot census. The field teams, instead, relied on verbal communications and reports. An operational dashboard would have saved a lot of time and effort and made the online monitoring system much better and easier to use.

Furthermore, because the said module was unavailable, there was no mechanism for receiving and compiling field progress. On July 20, 2022, the Field Services (FS) section, responsible for progress compilation, distributed control forms to PBS census coordinators. The census coordinators found that providing progress to the PBS headquarters and army personnel in charge of the task was time-consuming and difficult.

3.2.3 Lack of Software Documentation

During the pilot census, the consulting agency provided no documentation to PBS on the house listing and enumeration applications, database design and architecture, data security plan, IT-based user manuals, and audio/video tutorials.

3.3 Training related Issues

3.3.1 Training of Master Trainers and Enumerators

For the Pilot Census, master trainers were trained at PBS HQ Islamabad from the 5th- 7th of July 2022. Enumerators were trained at 27 stations across the country, including Azad Jammu, Kashmir, and Gilgit Baltistan, from 13th - 17th of July 2022. The pilot census training was evaluated using specially designed evaluation forms (Annex-30)*.* The forms were distributed to all training locations for the trainees/enumerators to complete. Following retrieval at PBS headquarters, these performance evaluation forms were analyzed.

3.3.2 Evaluation of Subject Matter and IT Master Trainers

Master trainers were evaluated based on trainee enumerators' ratings of (i) trainer ranking, (ii) training knowledge, and (iii) training preparation, using the master trainers' training evaluation pro-forma. Following a thorough analysis, it was discovered that the majority of trainers were well-prepared and knowledgeable about their subject. Similarly, IT trainers were evaluated and ranked based on their

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[5] "Guidelines on the Use of Electronic Data Collection Technologies in Population and Housing Censuses," Department of Economic and Social Affairs, Statistics Division, United Nations, New York, 2019.

knowledge and competency in training delivery. Figure 3.3 depicts the percent score based on the evaluation pro-forma filled out by the trainee enumerates.

Percent Score of Subject Matter Trainers   **Percent Score of IT Trainers**
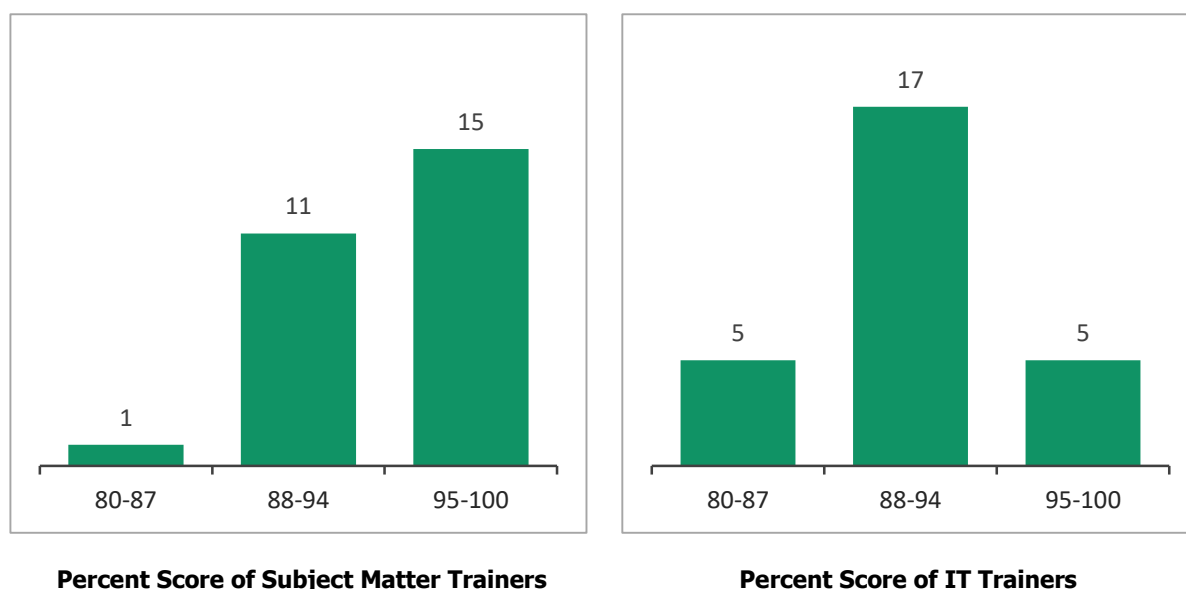
Figure 3.3: Percent Scores of Subject Matter and IT Trainers

3.3.3 Evaluation of Enumerators

The enumerators were evaluated based on their IT background, previous census experience and pre and post-training screening test. 417 enumerators took the test at twenty-seven training stations. The distribution of marks (%) from pre- and post-training enumerators (in % of total) is given in Figure 3.4, showing significant improvement after the training. More than 15% of the trainee enumerators moved up the ladder, from the first three categories to the last two, and obtained more than 60% marks in the post training assessment test.
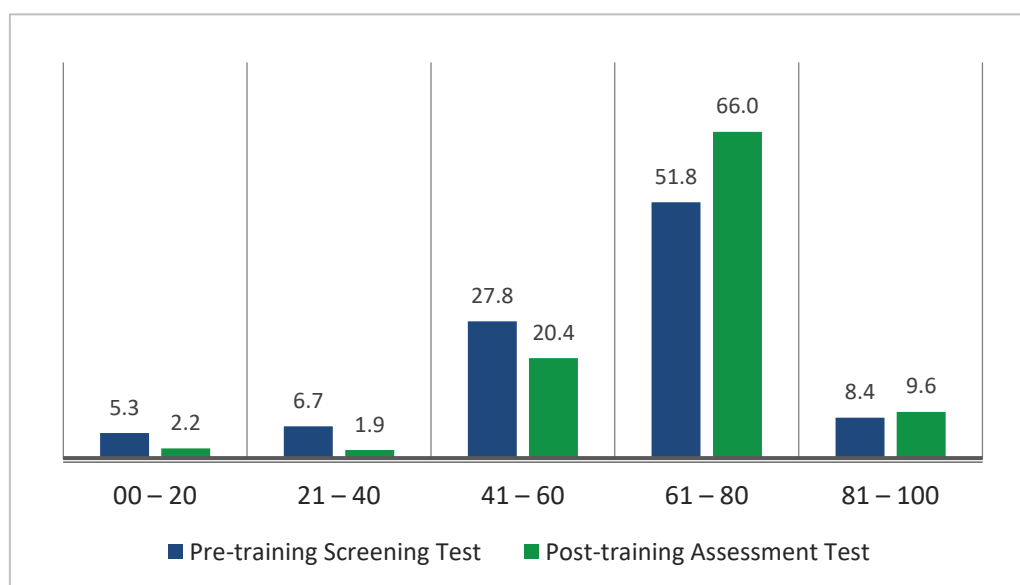
Figure 3.4: Enumerators' Pre- and Post-training Test Performance

3.3.4 Training Monitoring Committee for Pilot Census

An internal committee was constituted (Annex-31) for monitoring the training of pilot census through a proforma specifically designed for the purpose (Annex-32). This committee was responsible to submit report on daily basis for the issues faced during the training process and reported by the master trainers and field staff of PBS. The mechanism was devised to manage the problems on urgent basis either through the support of concerned from PBS or coordinating a quick response from the consulting agencies.

Several issues were identified during the training sessions. Table 3.1 provides a brief description of the issues, as well as a few area examples where the problem occurred.

Table 3.1: Issues Identified During Trainings Imparted for Pilot Census

Issue	Description	Remarks (Frequency)
Internet connectivity	Internet connectivity was a major issue, internet devices were not working.	Dassu District Kohistan, Mithi, District Tharparkar
Familiarity with android devices	Lack of enumerator's experience with android devices	Jamshoro
Attendance of enumerators	Absence of enumerators during training for various reasons.	Karachi East, Gawadar
Replacement of enumerators	Enumerators were replaced on frequent basis.	Karachi East, Islamabad
Late delivery of devices	Tablets were late delivered.	Karachi East, Sanghar, Jamshoro
NADRA trainers not present during training	NADRA representatives joined on third day of the training.	(26/27)

3.3.5 Evaluation of Training Venues

On the final day of the training, a proforma was distributed to the trainees for feedback on the trainings. The trainee enumerators identified several issues regarding trainings and training venues, summarized in Table 3.2.

Table 3.2: Issues Identified by Trainees about Training Venues in Pilot Census

Issue	Description	Remarks (Frequency)
Remuneration and training charges	Several complaints received from enumerators regarding low remuneration charges.	(27/27)
Electricity and generator	Backup generator not available or not working during electricity load shedding.	Mithi, D.I.Khan, Abbottabad, Kalat,
Training hours	Several enumerators complained about long training hours.	(101/714)

Issue	Description	Remarks (Frequency)
Training venue related issues	At several places, enumerators asked for comfortable air conditioned hall. There should be provision of Multimedia projector, sound system and microphone.	

3.4   Conceptual and Questionnaire Related Issues

Table 3.3 briefly discusses some of the conceptual and questionnaire-related issues encountered during the Pilot Census.

Table 3.3: Conceptual and Questionnaire Related Issues Identified During Pilot Census

Issue	Remarks (Frequency)
Enumeration issues: Enumerators were not clear, for example in: • Under construction structure if some family is living. • Structure number on Khanqah. • PSIC codes of masjid, petrol pump, bara, filtration plant. • Code of daily wages labor. • Unable to distinguish services, manufacturing and retail trade activities. • Manpower engaged for economic activity. • Listing of leftover households for enumeration. • Listed household temporary absent. • Livestock activity at household.	Sufficient practical training at some stations could not be arranged due to late delivery of devices. Concept of structure (multistory, residential and economic activity) was not clear in the manual, and FAQs and PSIC code description were missing in the manual. Similarly, preparation of video clips and audio messages in different regional languages to explain different census concepts were also missing during the Pilot Census.
Procedural issues: • Some enumerators put household numbers on gates instead of structure number. • Some enumerators were not doing listing as per prescribed procedure. • Enumerators working in scattered areas repeatedly asked for permission for enumeration along with listing. • Big blocks found during pilot, question regarding cut off point that when and where big block should be declared was asked repeatedly due to non-provision of assigning one block to another enumerator in the application and remained unaddressed.	Sanghar Jhelum, Taxila, Mirpur, Mansehra, Abbottabad, Islamabad, Khushab (10/417)

3.5   Hardware and Software/IT Related Issues

Hardware and software are critical components of the success of a digital census system. It is dependent not only on their compatibility, but also on the suitability of the hardware in the field and the overall reliability, accuracy, efficiency, and security of the software bundle used

during the census operation. The following sub-sections discuss the hardware and IT related issues faced during pilot census.

3.5.1 Hardware Related Issues

NADRA was required to provide new tablet devices per PBS specifications for pilot census. Due to time and other constraints, they rented out pre-owned tablet devices with low specifications through BISP. A comparison of the two is given in Table 3.4.

Table 3.4: Comparison of Required and Provided Hardware for Pilot Census

S. No.	Module	Required	Provided by NADRA
1	Status	Brand new	5 years old/ used
2	CPU	2.0G Hz Octa core 64bit	1.5 GHz quad core, RAM based 64-bit
3	RAM/ROM	8GB + 128GB EMCP	3 GB
4	Display	8-inch IPS/AFFS 1200×1920	7-inch, 720×1280 HD
5	SIM support	2G/3G/4G/BT/GPS/WIFI/	2G/3G/4G, BT, GPS
6	WIFI/BT	Dual band	WIFI
7	Battery	18,600 mAh	9,650 mAh
8	SD Card	128 GB	32 GB
9	QR/Barcode Reading	Integrated QR/PDF417	RFID, NFC, Barcode
10	Camera	13 MP (AF) with flash led	13 MP with AF with Flash Led

As a consequence of the above, PBS faced many issues due to these old and low specification tablet devices. Some of the issues regarding tablet and hardware are briefly discussed below:

Table 3.5: Issues Identified Relating to Hardware Used in Pilot Census

Issue	Description	Remarks (Frequency)
Battery drainage, short battery span and device heat up issue	Average life span of tablet battery is around 4 to 5 hours after full charging. During enumeration battery timing of tablet device decreased rapidly.	This type of problem reported from every station.
Lack of power banks	Power banks are required for remote areas where access to electricity is difficult.	Gawadar, Tharparkar, Kohistan (36/417)
Login problem	Unable to login due to weak signals	Jhelum valley (10/417)
Weak internet signals	Less coverage of Telco's in some areas specifically remote and rural areas. This created connectivity, availability of map and syncing problems.	Kalat, Gawadar, Khushab, Khuzdar, Kohistan (38/417)
Network/SIMs connectivity	At some areas, selection of Telco's was not according to the coverage of that area.	Kalat, Gawadar, Khushab, Khuzdar, Kohistan (38/417)

3.5.2 Software/IT Related Issues

As per the contract with NADRA, eight modules were prioritized for testing and evaluation. However, only two modules, Housing Listing Application and Enumerator Data Collection Application, were *partially* completed and provided by NADRA before the start of pilot census.

Several issues regarding house listing and enumeration applications were raised during the training sessions and field operation, which were either resolved instantly or with some time lag due to the lack of an effective coordination and communication mechanism. Some of the major software related challenges PBS faced are briefly discussed in Table 3.6 (details are in Annex-33):

Table 3.6: Issues Identified in Software Modules during Pilot Census

Issue	Description	Remarks (Frequency)
Login	Login issue due to unavailability of network and un-registered IMEIs in MDM	e.g. Karachi East, Multan (9/27)
Import block listing	Issue in importing data in both House-Listing and Enumeration Applications due to false implementation of business logic.	e.g. Abbottabad, Jhelum (15/27)
Maps / locations	Slow GPS sensor invocation in the application. Maps issue was due to imagery used in the applications.	e.g. Jamshoro, Sanghar, D.I.Khan (20/27)
Validation checks implementation[*]	Not fully implementation of validation checks provided by PBS to NADRA that resulted in applications crashes and delays in data collection.	e.g. Karachi Central, Uppper Kohsitan, Multan (18/27)
Record update issue (start / finish household)	Non-availability of auto-sync and post-sync editing which were major hurdle of record update.	e.g. Khushab, R.Y.Khan, Islamabad (18/27)
Sync/ Upload	Queuing of the processes in API was not properly implemented due to which enumerators faced hurdles in uploading/syncing of data.	e.g. Jhelum Valley, Mirpur, Gilgit, (17/27)
Application crashes	Unhandled exceptions and in-memory storage of huge data caused the applications to go to halt and eventually application crash.	e.g. Upper Kohistan Abbottabad, Mirpur (10/27)
Manual handling of International Mobile Equipment Identity (IMEI)	System was unable to fetch the IMEI numbers of tablets, due to which IMEI numbers along with respective block codes as well as enumerator information was manually collected from field and shared with NADRA.	(417/417)

Issue	Description	Remarks (Frequency)
Data loss and incorrect restoration	Data loss after logging off even after syncing. Data loss after rebooting the tablet.	Mirpur, Kalat (9/417)
Block assignment issue	Blocks swapping issue, block assigned to one enumerator but showing to another.	(2/417)

*Case study regarding validation check

PBS submitted the validation checks to NADRA, which included a restriction on having more than one spouse for a given woman in a family. The developers of NADRA also incorporated the check in vice versa, which caused a major issue because the application did not permit more than one wife per husband. This issue was widely reported in Sindh and Khyber Pakhtunkhwa. Enumerators were instructed to note the addition of a second wife as an 'Other Relative' member as a temporary measure.

3.5.3 Infrastructure (Compute and Storage Facility)

Mobile Device Management (MDM) is used to enforce mobile device security and policies using a central management console. MDM was extremely helpful during the pilot census activity, it was deployed and managed completely by the NADRA team. However, the PBS team was denied access, resulting in delays for each configuration and reporting request.

Access mechanism covers all the hardware and software login credentials and SOPs to access the Infra/Apps. During pilot census, it was discovered that all the users used administrator's logins on different machines, which may lead to cyber security breach of the system.

NTC provided infrastructure resources, allowing the NADRA team complete access to the Census Turnkey Solution. The primary site infrastructure was used, however due to the limited scope, it was not possible to test the entire load. Furthermore, the disaster recovery site became available after the start of the pilot, making it impossible to use its resources during the activity.

3.6 GIS and Map Related Issues

Maps ensure proper delimitation of areas for complete coverage and to avoid population overlap. They are primarily responsible for assisting enumerators in identifying their assigned areas for various surveys and censuses. To improve accuracy and visualization, maps are digitized using imagery.

3.6.1 Area Frame Application

Area Frame application deals with hierarchal changes in geography and a repository of boundaries, so that respective boundary may be automatically uploaded on the potential tablet device based on the information regarding block assignment to the enumerator from HR module. Due to unavailability of this module, boundaries along with device IMEI were collected from field and shared manually with NADRA.

3.6.2 Non-deployment of Map Server

Tehsil-level imagery was required to automatically upload from the map server onto the respective tablet devices based on enumerator block assignment. However, due to NADRA's delayed identification of imagery problems, neither corrected imagery nor a map server was available. As a result, 253 block-level imagery provided by SUPARCO with the mentioned block codes was transferred manually to the tablet devices instead of automatically fetching imagery from the map server.

3.6.3 Map Allocation/Imagery

One of the major issues encountered during pilot census field operations was the inability to provide visible and correct imagery for the geographical areas, boundaries, and structures. The major challenges PBS encountered regarding maps and imagery are discussed in Table 3.7.

Table 3.7: Issues Identified Relating to Map and Imagery

Issue	Description	Remarks (Frequency)
Incorrect Polygons Codes	A few polygon codes against blocks were interchanged, due to which enumerator's assigned block was shown different.	Two admin changes in area frame of Nagar District of Gilgit Baltistan. (2/417)
Erroneous big block polygon	Few polygons were mistakenly comprised of multiple blocks polygons.	Rahim Yar Khan, Mithi (2/417)
Difference of sketch and digital map	Sketch maps/hard copy maps were provided to enumerators which were different from the application's digitized maps.	Thano Bula khan, Chelhar and Khushab (3/417)
Unrealistic block distance	Application was getting a random point of reference from blocks boundary and showing distance from there to enumerator's location which seemed unrealistically far away from block and caused confusion.	(417/417)
Low map resolution and poor/no visibility	Initially street maps were being displayed on application. After listing of 253 blocks, SUPARCO imagery of 0.98m resolution was embedded for 206 blocks. Due to low	Mansehra, Islamabad (14/253)

Issue	Description	Remarks (Frequency)
	resolution structures were not clear to enumerators.	
Satellite image problem	Many cases were reported where background image was not properly displayed because Open Source Maps were used.	(164/417)
Non availability of POIs	POIs of block were not shown on tablet by NADRA due to which problem of identification arose.	(417/417)
Boundary problem	Tehsil boundary dispute was observed at Kohat due to application error.	Gumbat Tehsil & Darra Adam Khel Sub-division in a block which was resolved.
Misunderstanding of map by Enumerator	Few cases appeared in which the enumerator was unable to understand the map or location.	Islamabad, Gawadar, Jhelum Valley District (4/417)
Big blocks*	Few blocks are too much thickly populated or dispersed in big geographical area. Enumerators found more than 600 structures and around 500 households on ground.	Jhelum, Taxila, Mirpur and Islamabad (5/417)
Wrong reporting of big blocks	Enumerators wrongly reported big blocks. This problem occurred due to the enumerators not having proper concepts of house and household.	(8/417)

*Case study: Monitoring Visit of a Big Block in Taxila

During a visit, it was observed that this was a complete rural mauza, with nearly half of the mauza converted into the "New City Housing Society." This mauza includes three housing society blocks (Blocks B, D, and E) and the commercial area. A few existing mauza houses were also included in this block. Some parts of this block were separated by societal boundaries and require a long travel time to reach. It was also discovered that the application calculated the distance from the block's self-defined starting point, which confused the enumerator and displayed the incorrect distance from the block boundary.
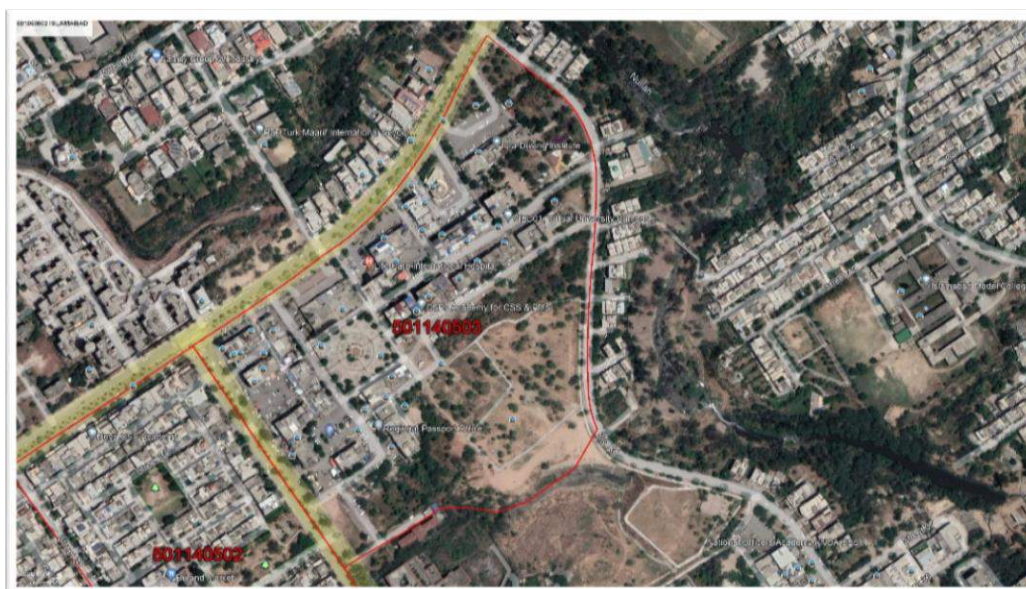
Figure 3.5: Block No. 501140503 of Rawalpindi District

3.7 Field Services and Security Issues

Various challenges were encountered during the pilot field enumeration:

- An insufficient number of census support centers
- Long monsoon spells cause delays in enumeration
- Security of the field staff
- Temporary migration
- Non-response

3.7.1 Field Enumeration Issues

Table 3.8: Field Enumeration Related Issues during Pilot Census

Issue	Description	Remarks
Parallel demand for daily progress review	Some coordinators reported that they had to coordinate with HQ, Army personnel and enumerators in parallel, rather than in sequence, for progress review.	Mirpur, Hatian Bala, Abbotabad, Kohistan
Insufficient number of Census Support Centers in Balochistan*	In Balochistan, admin Districts have been declared as Census Districts. It was observed during enumeration that due to large area it was difficult to provide immediate technical assistance to the enumerators in field.	Turbat, Gawader, Ormara, Pasni, D.I. Khan
Technical and logistic support to the field staff	In Khyber Pakhtunkhwa, difficulty observed in technical and logistic support to the field staff.	Kolai Palas, Dassu

Issue	Description	Remarks
Census Support Centers located at District HQ in Khyber Pakhtunkhwa**		Upper Kohistan, Torghar, D.I. Khan

*Case Study Regarding Gwadar-Ormara Distance:

In Balochistan, CSCs are established at the administrative district level. It was observed that it's not feasible to visit Ormara, a tehsil of district Gwadar, 320 km away from Gwadar, within a day to distribute tablet devices and perform other support activities. It took away the purpose of setting up CSCs to help with logistics and coordinate and support activities.

**Case Study Regarding Location of Census Support Center:

CSCs are established at the administrative tehsil level in Punjab, Sindh, and Khyber Pakhtunkhwa. CSCs for Tehsil Harban Basha and Kandia are established in Upper Kohistan District of Khyber Pakhtunkhwa; CSCs for Tehsil Judba and Doumera in Torghar District; and CSCs for Tehsil Darazinda in D.I. Khan District. It caused problems and delays in logistical and other field support to the enumerators, as they had to travel long distances to receive census-related material from their designated CSC and to resolve hardware and IT-related problems.

3.7.2 Non-Response Issues

In rural areas, the response rate always remained adequate and similar was observed during the field operation. However, in some urban areas, especially in metropolitan cities, the response was not up to the mark, and the reasons for this may be as under:

- The main reason for non-response in affluent areas is early timing of enumeration
- Markets in commercial areas open late, resulting in a poor response
- Because there was no publicity or advertising for the pilot census, people were less likely to respond positively to the enumeration

Ten blocks couldn't be completed in Karachi East and Islamabad because the people who were asked didn't answer or wouldn't help.

3.7.3 Weather and Terrain issues

Throughout the country, the monsoon remained extremely active during the pilot census. Torrential rains devastated Balochistan and Sindh. Heavy rains from July 20th to July 23rd, 2022 caused urban flooding in Rawalpindi, Islamabad, Peshawar, Nowshehra, Mardan, Faisalabad, Lahore, and Gujranwala. During that time, rain caused landslides in Kashmir, Galiyat, Murree, Chillas, Diamir, Gilgit, Astore, and Skardu. The monsoon season significantly slowed down the pilot census field operation. Enumerators worked diligently to complete the task, but their work in seven (7) blocks (Mirpur, Islamabad, Jamshoro, Dadu, Washuk, and Karachi districts) could not be completed due to the weather.

During the pilot census field operation, it was also noted that some blocks in desert areas and Cholistan could only be accessed by 4x4 vehicles. One block of Liaqat Pur, Rahim Yar Khan, Cholistan could not be covered because no 4x4 vehicles were available. Cholistan comprises of many *Tobas* like villages that will be prioritized for coverage as part of the full rollout of Census 2022.

3.7.4 Security Issues

To ensure the safety of the enumerators working on the pilot census, one-on-one police personnel was assigned. In this regard, enumerators raised the issues discussed here.

- In some blocks, police could not reach on time during the earlier days of field operation. However, coordination was improved later on and the issue got resolved, but in some blocks this issue persisted till the end.

- The police were unprofessional by demanding pick & drop facility/ lunch from enumerators or PBS officials. The matter was resolved amicably after the intervention of army personnel in some places.

- During working hours, some police officers were away from their posts, citing urgent matters at their stations as an excuse.

- Some police officers took extended lunch breaks and then insisted on finishing the enumeration work by 4:00 p.m. It was impossible for the enumerators because they had to cover the delayed hours to reach the target. In such a situation, the enumerators worked without any security.

3.7.5 Other Issues

In addition to already explained, some other issues were also highlighted by the field staff, which are discussed here.

i. **Temporary Migration**

   Some residents of one of the blocks refused to be counted because they were not originally from that Mouza and were only temporarily residing there because of flooding. The problem was resolved on the intervention of Assistant Commissioner of the area and enumeration was completed successfully.

ii. **Inappropriate Reporting Time for Progress to Army**

   The Army required daily updates from field personnel or PBS representatives at 5:00 PM. In practice, it became clear that enumerators couldn't adhere to this strict reporting time because they needed to adjust their schedules on the availability of the respondents. The progress reporting deadline of 5:00 p.m. was impossible to meet if enumerators had to start late, take a break in the afternoon, or continue enumeration until late at night.

iii. **Issues Raised by Regional/Field In charge (s)**

Some issues were highlighted by the Regional/Field Incharges of PBS, which are described below.

–   At some Census Districts, stationery was not provided to PBS representatives. In this situation, PBS R/F Incharges provided stationary to PBS representatives from their regular budget

–   Less budget was provided for POL expenses for generators and installation of generators

–   Less budget was provided for the maintenance and repair of hardware and IT equipment

–   During the field operation, only announcements were made twice a day from mosques in the selected blocks, resulting in a lack of publicity. These announcements went unnoticed in major cities and had no impact on educating the public about the process or motivating them to respond

Chapter 4
Recommendations-Way Forward

Chapter 4: Recommendations-Way Forward

This chapter recommends that the pilot census's ultimate goal is to devise a way forward for improvements in the digital census. Various arrangements and actions are highlighted in previous chapters to ensure the success of the full rollout of Pakistan's first digital population and housing census. Section 4.7 contains a summary of the recommendations.

A pilot census was conducted in 33 administrative districts from July 20th to August 3rd, 2022. Out of the total 417 blocks selected for enumeration, 368 blocks were fully enumerated, whereas work in the remaining blocks could not be completed for various reasons.

For the evaluation of the pilot census, different parameters related to the questionnaire, training, coordination, maps, software and hardware, field services and security, etc., have been analyzed comprehensively. The concerned departments highlighted the shortcomings during the pilot testing and made recommendations to improve the system before the full rollout of Census 2022. There were a total of sixteen software modules finalized with NADRA for the "digital" 7th Population and Housing Census-2022, with eight of those modules being given priority for the pilot census. However, only two modules (the house listing application and the enumeration program) were evaluated during the pilot census with restricted features.

This chapter presents the recommendations in response to the problems encountered while conducting the pilot census field operations and suggestions received to revise and improve the process.

4.1 Training, Questionnaire, and Related Material

The core components of any census or survey are well-designed questionnaires and extensive training. In the same way, the success of a pilot census hinges on the comprehensive training of field staff on filling out of questionnaires and use of other helpful modules before the start of field activities.

I. Training related Material

Based on the evaluation of training during the pilot census, it is suggested that dedicated teams of PBS and provincial government representatives be formed to finalize suitable and equipped training venues. The critical components of training that were missing in the pilot census were training and tutorial videos. It is recommended to develop the instructional videos before the census of 2022.

It was observed that enumerators were not well trained in self-introduction and interviewing techniques. Therefore, a separate session on ethical and probing techniques is mandatory for the training sessions.

Many questions were raised due to the lack of clear instructions regarding employment, disability, scheduled castings, PSIC code description, etc. It is suggested that, when needed, diagrams and pictures may be used to explain the process of listing and enumeration. The manuals should have the right information about age, PSIC code, employment, disability, and "Mujawar" living in "Khanqah."

A complete list of scheduled casts may be included in the instructions manual. In addition, the Frequently Asked Questions (FAQ)s section of the manuals could be expanded to address issues such as: if a household has temporarily relocated to attend to domestic matters and will return, two options for data collection may be considered:

(i)   either take their phone number from the neighbors and collect information,
(ii)   or, in case of non-availability of phone number, take data from the neighbors/ near relatives.

II.   Questionnaire (Form-2)

During the field operation, it was also noticed that few changes/amendments to the questionnaire are required for comprehensive and effective enumeration. Therefore, it is suggested that the following changes may be included in the questionnaire before the full rollout of Census 2022.

i.   Relationship with the Head of Household
The list of relationship with head of household needs to be extended with more categories of relationships i.e. Nephew/Niece, Brother/Sister in law.

ii.   Marital Status
The category of "Separation" may be included in this column.

iii.   Migration Related Issues
Last migrated district question is required in migration.
There is no productive need of urban rural variable so this may be removed.

iv.   Gender of Owner of Household
In housing information form, under the question regarding sex of owner (Q2), code no. 3 to 5 may be moved to Q1 i.e. Ownership of house.

v.   Source of Lighting
In Source of lighting, code no. 3 & 5 needs revision.

vi.   Source of Fuel
It is recommended that source of fuel used in Kitchen, the information under code no. 6 may be separated in another code as code no. 7 because Bio gas is clean fuel but "Oplay" cause indoor air pollution.

4.2   Hardware and Allied Accessories

The 7th Population and Housing Census-2022 depends entirely on the adequate availability of hardware and software due to its digital nature. During the pilot census, many hardware and ancillary accessory issues were identified that must be resolved before the 2022 Census rollout. The relevant recommendations are presented in the following section.

i.   Availability of the New Tablet Devices

Most issues were caused by using old/used tablet devices. Similarly, early battery drain, frequent load shedding, and a shortage of charging facilities caused numerous issues in pilot census data collection. NADRA worked out the needs; however, due to time restrictions, NADRA could not offer the necessary hardware and accessories. The problems are expected to be addressed after the installation of the new hardware and accessories. It is critical to remember that once the new hardware and accessories are delivered, they must be field tested to ensure that they work well and are compatible with the census software before being utilized for the full-scale enumeration of the 2022 Census.

ii.   NADRA Technical Support

CSCs have been established at the census district level to provide logistical and technical support to field staff and to avoid unnecessary delays in complaint management and field issue resolution. NADRA is responsible for providing technical support at the CSC level. However, due to NADRA's inability to provide trained personnel on time, PBS IT professionals took this responsibility for the first five days of the pilot census. It is recommended that NADRA must ensure the necessary arrangements well in advance of the Census-2022 enumeration activities to support the field force.

iii.   Provision of Appropriate SIMs

Another issue that was raised during field staff training and field activity was the incompatibility of the SIMs installed in tablet devices with the area network, which caused log-in and synchronization issues. There is an urgent need to identify respective telecom coverage in each census district and block and arrange SIMs accordingly. Furthermore, it is recommended that additional SIMs from different networks may be provided at all CSCs to resolve connectivity issues immediately.

4.3   Census Software

For Census-2022, NADRA finalized development of sixteen different software modules, eight of which were prioritized for pilot census testing. However, only two modules with limited functionality were provided for testing during the pilot census. As a result, it is recommended that all of the following software must be provided well in advance of the entire census rollout to ensure the smooth and successful operation of the digital census. Furthermore, these softwares must be tested and audited for quality and security assurance.

i.   Automated Data Synchronization

Intelligent Data Synchronization Policy for auto-upload service, sync frequency, sync data set size compression, suitable data type's selection, database schema intelligence, data headers size reduction, allow bulk sync, reduce to many sync options available on different pages/screens. A single point of entry for data synchronization will make the process more user-friendly and efficient.

ii. Backup-data Synchronization

Although the software backed up the data, it was not automatically sent to the server and was instead saved on the tablet device. Moving data to the server at a predetermined frequency will thereby increase data reliability.

iii. Block Boundary Distance Accuracy

Though enumerators were notified for being outside their allotted blocks, they insisted they were standing within their assigned blocks. The application must be able to select the nearest reference point from the block boundary and compute its distance from the enumerator's placement. Otherwise, the distance will be unreasonable and may lead to misunderstanding the block boundary and its positioning with the enumerator.

iv. Resource Optimization

Resource Optimization is also vital. Continually running the auto-upload service in the background should be wisely used so that it does not drain the battery. In the quest for real-time data transmission, resources (batteries) are compromised (draining).

v. Availability of Complaint Management System

A complaint management system may be deployed to address end users' grievances and create a bridge between PBS and stakeholders for better coordination. During the pilot, the communication gap was the primary cause of delays in processing.

vi. Avoidance of Data Duplication

The referential integrity of data may be ensured. Database design and architecture was not shared with PBS; similarly, no pilot data analysis was shared. Database design may be reviewed with the PBS team to prevent possible issues.

vii. Auto Fetch International Mobile Equipment Identity (IMEI) Numbers

Some GIS-related issues required IMEI numbers from tablet devices, which required a lot of manual back-and-forth communication between enumerators and PBS officials. To avoid this manual retrieval of IMEI numbers, an automatic fetch mechanism should be in place to save time and ensure accuracy.

viii. Security Audit

Since data protection is of utmost importance, it is recommended that NADRA must provide a National Telecommunication and Information Security Board (NTISB) security audit report for the Census Turnkey solution as per the MoU. In the pilot census, this requirement was waived due to incomplete software and strict deadlines.

ix. Provision of Documentation and Source Code

Documentation (SDS, SRS etc.), user manuals along with audio/video tutorials, source code and APKs must be shared with PBS. In pilot census such information was not provided due to which the detailed technical analysis was not possible.

x. Security and High-end Availability of Self-Enumeration Portal

The self-enumeration portal will be developed and deployed publicly, so its security and availability are the most critical areas of consideration. NADRA may ensure SMS gateway implementation, data security, and 24/7 availability of the Self Enumeration Dashboard.

xi. Post Development Training

Post Development training to PBS by NADRA on overall use of system and development tools as per MoU is required.

Real Time Monitoring

i. Role Based Access

Real time monitoring dashboards are proposed to be role based. It should be login based system with relevant area based authorization.

ii. Dashboard Availability on Internet

NADRA has provided a draft dashboard, which was not accessible over the web. It was deployed on NADRA VPN and accessed through a dongle device. There should be no internet / network limitation because providing additional network devices to use this dashboard is not feasible. It should be secure and available to relevant census staff.

iii. Responsiveness

It should be a responsive Web-Based System with support for various devices (mobile, tablets, laptop, pcs) as field staff progress monitoring by Supervisor and Superintendent is required, and they will need access to these portals/dashboards from multiple devices.

iv. Instant Information Retrieval

Dashboards will be role-based and may be used by different users, including higher authorities and policy/decision makers, for efficient data retrieval and display on the dashboard, which is mandatory. Delays can affect the overall efficiency of the whole system.

v. Oracle DBMS to be used

PBS suggested using the latest standard application tools for the dashboard front and back end. It was agreed that Oracle would be used, but in the pilot census, MYSQL was used. Selection of DBMS tools, Database Schema, and Query Optimization is essential, which was the most significant root cause of failure to the desired response time of data display on the dashboard. PBS must be on-board to finalize tools/technologies for query optimization, and DBMS selection will be as per MoU.

vi. Incorporation of GIS Feature

GIS-based monitoring is essential and has wide use at different levels. GIS-based data display and monitoring should be maximized as GIS monitoring provides area-specific and better analysis of on-ground realities.

4.4 Compute, Storage and Network Infrastructure

i. Mobile Device Management:

The Mobile Device Management (MDM) system was completely deployed and managed by the NADRA team. No access was granted to the PBS team, resulting in delays for each configuration and reporting related request. In addition, NADRA has not disclosed information about the software, including whether it is custom-built, open source, or licensed. Therefore, it is recommended that the PBS team must be granted access to MDM, as well as documentation and training.

ii. Monitoring of Infrastructure

A network management and monitoring system is a program that generates alerts and alarms when certain thresholds are exceeded. This enables IT administrators to take the desired action to protect the system from major losses/downtimes. NTC should set up a network management dashboard to monitor the census infrastructure. The same dashboard could be extended to PBS headquarters for cross-checking and vetting by the PBS IT team. Hardware, software, and connectivity monitoring may be part of the monitoring system.

iii. Activity Log
A centralized repository may be used to keep track of all software activities. It should include, but not limited to, application updates, removal, changes, and version control. Licensed-based log software may be procured for this purpose. Moreover, periodic logs may be shared with the PBS team.

iv. Access Mechanism
As in the pilot census, all users used administrator logins, which could lead to a cyber-security breach of the system. It is recommended that best practices must be followed to ensure different privilege levels and credentials for users.

v. Certificate on Fulfillment of Infrastructure Requirement

NTC made infrastructure resources available to the NADRA team. However, due to the pilot census's limited scope, the full load of primary site infrastructure could not be tested during the field activity. Similarly, the disaster recovery site became available following the start of the pilot census. As a result, it is recommended that NADRA must inspect and certify that NTC has provisioned all necessary network, computing, and storage resources.

vi. SOPs for Support and Resolution of Issues / Queries

NTC may provide SOPs including a comprehensive mechanism for support and timely resolution of infrastructure related issues/queries through a coordinated effort. Detail of focal person(s) may also be provided to ensure 24/7 support during census activities.

vii. Security Audit

In light of the constant evolution of cyber threats, NTC may provide NTISB security audit report prior to full census rollout. Consequently, there is a greater need to develop and strengthen security measures to protect data and assets.

viii. Disaster Recovery Plan

Because of the late provision of resources by NTC and the time required for configuration by NADRA, the disaster recovery site has not been tested. Before the full census rollout, the NTC and NADRA teams must prepare and share a comprehensive disaster recovery plan.

ix. Completeness of Infrastructure

Although NTC has already provided infrastructure resources required for census activity, few components are still in the procurement process. Therefore, NTC may ensure timely provision of Oracle EXADATA, Oracle licenses, IBM Guardium, etc. so that testing may be performed before the full census rollout starts.

x. Training and Documentation

Due to lack of time, only necessary configuration and diagrams were prepared and shared by NADRA and NTC. But, for smooth conduct of full census rollout and technology transfer to PBS, it is highly recommended that NTC and NADRA prepare and share documentation related to infrastructure, configuration, diagram, etc. Also, training the PBS team by NADRA and NTC will ensure smooth infrastructure migration, along with census databases, etc., to PBS after the completion of the activity.

4.5 GIS, Digital Map and Imagery

i. Rectification of Polygon Block Codes

During the pilot census, it was observed that different block codes were erroneously tagged to some polygons. The PBS GIS section is required to rectify incorrect block codes for all polygons. Further, some polygons against the block were interchanged, due to which enumerators were shown the wrong block boundary. Therefore, it is recommended that boundaries may be verified before making them available to enumerators.

ii. Circle Level Imagery off-loading

Open Street maps were initially used for the pilot census. Later, imagery of 253 out of 417 blocks was replaced with block-level imagery from SUPARCO. This may cause difficulties for enumerators as they approach the designated block. At the time of tablet preparation, circle-level imagery must be preloaded automatically on the potential Tablet from the Map server.

iii. Big Blocks Identification and Coverage

Big Blocks may be examined using Google Earth and 2017 Census household data, and additional enumerators may be assigned to selected blocks. Moreover, the

selected blocks can be verified via GIS and PBS regional/field offices. Economic activity may also be considered as one of the criteria for declaring a large block, with number of houses and households.

In addition, enumerators had to physically cover the whole block twice for listing and enumeration purposes in some particularly big, distributed blocks. This requires enormous effort and time to accomplish. Therefore, it is suggested that parallel listing and enumeration must be permitted in selected dispersed areas, particularly in Balochistan province and the Kohistan district of Khyber Pakhtunkhwa.

iv. Detailed Analysis of Geo-tagging

Data of Geo-tagged location may be shared with GIS Lab Islamabad so that detailed analysis may be performed.

v. Point of Interests (POIs) Incorporation

During pilot census POIs of each block was shared with NADRA. However, due to time constraint same was not incorporated in data collection applications. It is recommended that POIs may be incorporated in imagery for facilitation of enumerators.

vi. Documentation and Training

Necessary documentation and training regarding imagery hosting and processing may be provided by SUPARCO and NADRA to PBS for future handling.

4.6 Field Operation

i. Demand of Progress Report by Security Personnel

The mandate of army and police during pilot census was only to provide security to the enumerators and field staff. However, there were some concerns from the field staff of PBS about asking for field progress, transport provision etc. It is, therefore, recommended that prior to going for the full rollout, comprehensive SOPs may be devised about the role of army and police during the census.

ii. Establishment of Sufficient CSC in Balochistan

In Balochistan, administrative districts have been designated as Census Districts for the 2022 census, and CSCs have been established at the level of Census Districts. The objective of CSCs is not only coordination, but also the provision of technical and logistic support, such as the delivery of tablet devices and accessories for census field operations. During the pilot census, it was observed that certain administrative districts in Balochistan consist of large, remote, and hilly areas are difficult to manage at the administrative district level. For example, tehsils Ormara and Pasni are 320 and 120 kilometres away from the Gwadar district, respectively. Approaching Gwadar for a technical resolution will be extremely difficult and will delay the entire procedure.

Furthermore, some CSCs have been established in such areas in Khyber Pakhtunkhwa just because of the presence of the Assistant Commissioner's office at District HQ. CSCs for Tehsil Harban Basha and Kandia have been established in Upper

Kohistan; CSCs for Tehsil Judba and Doumera have been established in Torghar District; and CSCs for Tehsil Darazinda have been established in D.I. Khan District. As a result, the goal of creating CSC at the tehsil level could not be achieved due to problems and delays in logistical and other field assistance for enumerators. Therefore, it is recommended that such areas may be identified and CSCs may be established at tehsil level.

iii. Logistic Support

Staff faced logistical challenges during the pilot census in desert/hilly/distant areas such as Kolai Palas, Dassu, Nagarparkar, Ormara, Pasni, Cholistan, and others. Therefore, it is recommended that such districts/areas must be identified before the full rollout of census activity. Appropriate planning may be designed to provide logistic support to remove these impediments before the full rollout.

iv. Timing Issue

In big cities like Islamabad, Karachi, Lahore, etc., respondents were not available for enumeration at certain hours in the morning or evening. Similarly, most commercial areas start their activities late in the morning and remain open till late at night. Therefore, enumerators faced many difficulties in completing their enumeration, and no response was recorded in many instances. No response was also reported from many households whose members proceeded to their duties. So, to reduce the chance that people won't answer, it's suggested that enumeration times in big/metropolitan cities may be flexible.

v. Strengthening of Field Services Section

The field services section collected daily progress manually during the pilot census field operation without a digital dashboard. It was observed that the existing strength would not be sufficient to obtain and manage daily progress during the full rollout of Census 2022 in the absence of the digital dashboard. However, the problem will be resolved once the digital dashboard is in place during the main census field operation.

vi. Permanent Number Marking

It was observed that the marking numbers used for structure identification during the pilot vanished due to rain/sunlight in various locations. It is therefore recommended that permanent markers may be procured and used during the main census field operation.

4.7 Summary Recommendations

- For further clarification on various census-related concepts, training materials and manuals must be reviewed.

- NADRA had already worked out the specifications for census tablet devices and related accessories. The hardware issues that surfaced during the pilot will be resolved following the delivery of new tablet devices and accessories. However, after acquiring new hardware, it may be field tested for reliability and compatibility with census software before being used for the full rollout.

- For internet SIMs, it is imperative to determine telecom coverage in each census district and block so that SIMs can be arranged according to the best service available.

- NADRA must deploy trained personnel at Census Support Centers to provide immediate technical support to the census field staff.

- PBS and NADRA had finalized sixteen software modules for Census 2022. During the Pilot, however, only two modules with limited functionality were tested. For the Census 2022 to operate smoothly and successfully on the ground, all software must be completed well in advance of the full rollout. The census software modules need to be fully tested and audited for quality and security assurance.

- To avoid confusion and accurately identify enumerators' position relative to their block boundary, the application should select the nearest reference point from a block edge and calculate its distance from the enumerators' location.

- Documentation (SDS, SRS etc.), user manuals along with audio/video tutorials, source code and APKs must be shared with PBS.

- Since Self-enumeration portal will be deployed publically so its security and availability are the most critical area of consideration. NADRA may ensure SMS gateway implementation, Data Security and 24/7 availability of Self Enumeration Dashboard.

- Real time monitoring dashboards should be responsive web-based system with support for various devices (mobile, tablets, laptop, pcs), as field staff progress monitoring by the supervisors and superintendents is required and they will require access to these portals/dashboards from multiple devices.

- PBS must be on-board for the finalization of tools/technologies for query optimization and DBMS selection need to be as per the Memorandum of Understanding.

- Necessary access to Mobile Device Management, along with documentation and training, may be provided to the PBS team.

- NTC should establish a network management dashboard to monitor the census infrastructure. The same dashboard may be extended to PBS premises for cross check and vetting on the part of PBS IT team.

- In the Pilot, administrator's logins were used by all the users, which may lead to a cyber-security breach of the system. Therefore, the best practices should be followed to ensure users' different privilege levels and credentials.

- Big Blocks may be scrutinized on the basis of Google Earth and households from Census 2017, and additional enumerators may be appointed to the selected blocks. Further, economic activity and the number of houses and households may also be considered for the declaration criteria of a big block.

- For technical support at the nearest place, tehsils in Balochistan, Azad Jammu and Kashmir, and Gilgit-Baltistan may be identified for establishing Census Support Centers.

- POIs may be incorporated into imagery for the facilitation of enumerators.

Chapter 5: Conclusion

Chapter 5: Conclusion

A pilot census thoroughly evaluates the entire census's protocols and procedures. It is a method to identify the most significant implementation issues, analyze them in light of available technological and other resources, and then suggest a course of action. During the full-scale operation of the primary population and housing census, it maintains the system's accuracy, dependability, and efficiency as a whole. However, the pilot census alone may not be sufficient to fully test tools and technology due to its limited scope and the non-existence of some risks present in a full-fledged census operation. Therefore, along with the pilot activities, it is imperative to ensure that the technology solutions are accurate, secure, accessible, and scalable for the actual census. During the testing phase, stress tests are essential to perform, confirming that the system created for the census can manage the maximum load of each module while maintaining data integrity.

For the 7th Population and Housing Census 2022, PBS conducted pilot census from 20th July 2022 to 3rd August 2022 in 33 administrative districts all over Pakistan, including Azad Jammu & Kashmir and Gilgit Baltistan. Master Trainers attended a three-day training session at PBS headquarters from July 5th to 7th, 2022, while enumerators received training from master trainers in the field at 27 locations from July 13 to 17, 2022. The enumeration and supervisory staff were provided by the respective district administration of each province/ district. Out of the 33 districts, 417 blocks were selected for pilot enumeration, but three were excluded before any fieldwork had begun. Of the remaining 414 blocks, 368 were completely enumerated (88.9%), while work in 46 blocks (11.1%) could not be completed owing to factors including: rain, big blocks, delay in the provision of tablet devices, battery drainage issue, and map related issues. Due to connectivity, technology, and coordination issues, many districts' pilot census started 2–5 days later than planned. Around 60% of the enumeration had been accomplished in the remaining 46 blocks. In total, 396 equivalent blocks were completed, which is 95% of the total in just 15 days. Given the novelty of the digital census and the fact that all of the participating organizations learned something from the experience, the results are positive so far.

Despite the overall success in managing the pilot census activities, several issues are identified during the process. During the training of master trainers and enumerators, many queries were raised regarding employment, disability, scheduled casts and description of PSIC code, mainly due to the lack of clear instructions. Also, during power outage, several training locations did not have access to or were not equipped with backup generators.

Initially, PBS finalized sixteen software modules with NADRA for Census 2022, and eight modules, including the Self-enumeration web portal, were prioritized for pilot census. However, only two modules- the house listing application and the enumeration application, were available for pilot testing and evaluation. But these two modules were available with restricted features.

Similarly, used tablets from BISP with low specifications and batteries with short life spans were provided for the pilot. The much-needed power banks were supplied later than expected in the field. The Area Frame application was not available to automatically publish block boundaries on the tablet devices based on block assignment information from the HR module. Due to the unavailability of this module, boundaries along with device IMEI were collected from the field and shared manually with NADRA. When blocks were assigned to the enumerator, the map server was not set up to immediately upload imagery to tablet computers. As a result, block-level imagery was uploaded manually to the tablets rather than automatically downloading imagery from map server. Internet availability also remained a significant issue during the field operation of the pilot census, as SIMs were provided in most of the areas without taking into consideration the availability and coverage of the telecom companies.

The unavailability of progress monitoring software was another key shortcoming noted during the pilot. This software aims to increase provincial stakeholders' trust in the process and outcomes by granting them level-based access. Software for managing communications, inventories, and human resources could not be created either.

Under the terms of the MOU, NADRA is responsible to provide the results of the National Telecommunication and Information Security Board's (NTSB) audit report of the Census Turnkey solution's security. The pilot census was less rigorous than usual because of the pressure to meet deadlines and incomplete softwares.

While considering the critical constraints mentioned above in the pilot census, it is important to suggest a new pilot with access to all necessary hardware, accessories, and software modules and accurate mapping of the entire country for complete network coverage. For various software processes, scalability tests are crucial to include in the next plan. Before the full launch of the Census 2022 field operation, accuracy and security-related metrics may be defined and validated for various software systems.

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Annexures

GOVERNMENT OF PAKISTAN
MINISTRY OF INTER-PROVINCIAL COORDINATION
(IPC DIVISION/ SECRETARIAT OF COUNCIL OF COMMON INTERESTS)
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F.No.2(121)/2016-CCI   *Islamabad* the, December 23, 2016

Subject: -   **DECISIONS OF THE MEETING OF THE COUNCIL OF COMMON INTERESTS (CCI)**

A copy of the decision(s) taken in the meeting of the Council of Common Interests held **on December 16, 2016 at 10:00 A.M.** in the Prime Minister's Office, Islamabad is sent herewith for information and necessary action in terms of Rules 6 and 11 of the Rules of Procedure of the Council of Common Interests (CCI).

2.   Action to implement the aforesaid decision(s) may please be initiated immediately and status of implementation may be reported to the Ministry of Inter Provincial Coordination/CCI.

3.   The enclosed certificate acknowledging receipt of the CCI decision(s) may please be returned, duly completed and signed.

(Khial Zad Gul)
Joint Secretary (CCI)
Ph: 9103518

Minister for Finance, Revenue, EAD, Statistics & Privatization	Case No.CCI.2/3/2016
Minister for Water and Power	Case No.CCI.1/3/2016(i) Case No.CCI.1/3/2016(iii) Case No.CCI.7/3/2016 Case No.CCI.8/3/2016
Minister for Planning, Development and Reforms	Case No.CCI.1/3/2016(ii)
Minister for Petroleum & Natural Resources	Case No.CCI.1/3/2016(iv) Case No.CCI.1/3/2016(v) Case No.CCI.6/3/2016
Minister for Climate Change	Case No.CCI.1/3/2016(iii) Case No.CCI.5/3/2016
Secretary, Water and Power Division	Case No.CCI.1/3/2016(i) Case No.CCI.1/3/2016(iii) Case No.CCI.7/3/2016 Case No.CCI.8/3/2016
Secretary, Statistics Division	Case No.CCI.2/3/2016
Secretary, Finance Division	Case No.CCI.3/3/2016 Case No.CCI.4/3/2016
Secretary, SAFRON Division	Case No.CCI.3/3/2016 Case No.CCI.4/3/2016
Secretary, Climate Change Division	Case No.CCI.1/3/2016(iii) Case No.CCI.5/3/2016
Secretary, Petroleum & NR Division	Case No.CCI.1/3/2016(iv) Case No.CCI.1/3/2016(v) Case No.CCI.6/3/2016
Secretary, Cabinet Division	Case No.CCI.8/3/2016
Secretary, Planning, Development & Reforms Division	Case No.CCI.1/3/2016(ii)
Secretary, Federal Education & Professional Training Division	Case No.CCI.1/3/2016(ii)

Case No.CCI. 2/3/2016 Dated 16th Dec, 2016	Sixth Population and Housing Census

DECISION

After detailed discussion, the CCI approved the following proposals submitted by the Statistics Division /Pakistan Bureau of Statistics in their summary dated 8th December, 2016 :-

a) Census may be held on traditional method using paper based questionnaires starting from 15th March, 2017 as per field operation plan given by Statistics Division.

b) House Listing and Census Operation may be carried out in one go. Form-2 only may be used in the Census Operation, while Form 2-A may be filled in on sample basis, after the Census Operation is over.

c) Census may be held in two phases, each phase may be carried out in all the provinces simultaneously.

d) All relevant stakeholders at Federal and Provincial level may be directed to extend cooperation to PBS during Census Operation.

Population by Sex (in Million Nos.) of Administrative Units, Censuses : 1951-2017

Name of Administrative Unit	Area in '000' Sq.km	Population (Million)					
		1951	1961	1972	1981	1998	2017
Pakistan	796.10	**33.74**	**42.88**	**65.31**	**84.25**	**132.35**	**207.68**
Male		18.15	22.96	34.83	44.23	68.87	106.34
Female		15.59	19.92	30.48	40.02	63.48	101.34
Khyber Pakhtunkhwa	74.52	**5.12**	**6.39**	**8.39**	**11.06**	**17.74**	**30.51**
Male		2.70	3.33	4.36	5.76	9.09	15.45
Female		2.42	3.06	4.03	5.30	8.65	15.06
FATA	27.22	**0.77**	**1.19**	**2.49**	**2.20**	**3.18**	**4.99**
Male		0.41	0.63	1.27	1.14	1.65	2.55
Female		0.36	0.56	1.23	1.06	1.52	2.44
Punjab	205.35	**20.64**	**25.58**	**37.61**	**47.29**	**73.62**	**109.99**
Male		11.05	13.64	20.21	24.86	38.09	55.92
Female		9.59	11.94	17.40	22.43	35.53	54.07
Sindh	140.91	**6.13**	**8.47**	**14.16**	**19.03**	**30.44**	**47.85**
Male		3.39	4.67	7.57	10.00	16.10	24.88
Female		2.73	3.80	6.58	9.03	14.34	22.97
Balochistan	347.19	**1.09**	**1.25**	**2.43**	**4.33**	**6.57**	**12.34**
Male		0.60	0.69	1.29	2.28	3.51	6.48
Female		0.49	0.56	1.14	2.05	3.06	5.85
Islamabad	0.91	**-**	**-**	**0.23**	**0.34**	**0.81**	**2.00**
Male				0.13	0.18	0.43	1.05
Female				0.11	0.16	0.37	0.95

*1972 Excluded Population of FATA and Kohistan
**Female Population not Included In FATA 1998

Population by Sex (% share) of Administrative Units, Censuses : 1951-2017

Name of Administrative Unit	Area in '000' Sq.km	Population (% share)					
		1951	1961	1972	1981	1998	2017
Pakistan	796.10	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Male		53.78	53.54	53.34	52.50	52.04	51.20
Female		46.22	46.46	46.66	47.50	47.96	48.80
Khyber Pakhtunkhwa	74.52	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Male		52.70	52.10	52.01	52.09	51.22	50.63
Female		47.30	47.90	47.99	47.91	48.78	49.37
FATA	27.22	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Male		53.19	52.70	50.82	51.98	52.01	51.11
Female		46.81	47.30	49.18	48.02	47.99	48.89
Punjab	205.35	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Male		53.54	53.33	53.74	52.57	51.74	50.84
Female		46.46	46.67	46.26	47.43	48.26	49.16
Sindh	140.91	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Male		55.38	55.19	53.51	52.55	52.88	52.00
Female		44.62	44.81	46.49	47.45	47.12	48.00
Balochistan	347.19	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Male		54.83	54.94	53.11	52.72	53.40	52.57
Female		45.17	45.06	46.89	47.28	46.60	47.43
Islamabad	0.91	**-**	**-**	**100.00**	**100.00**	**100.00**	**100.00**
Male				55.28	54.31	53.93	52.54
Female				44.72	45.69	46.07	47.46

Population by Urban/Rural Breakdown (in Millions Nos.) of Administrative Units
Censuses : 1951-2017

Name of Administrative Unit	Area in '000' Sq.km	Population (Million)					
		1951	1961	1972	1981	1998	2017
1	2	3	4	5	6	7	8
Pakistan	796.10	**33.74**	**42.88**	**65.31**	**84.25**	**132.35**	**207.68**
Rural		27.75	33.23	48.72	60.41	89.32	132.01
Urban		5.99	9.65	16.59	23.84	43.04	75.67
Khyber Pakhtunkhwa	74.52	**4.56**	**5.73**	**8.39**	**11.06**	**17.74**	**30.51**
Rural		4.05	4.97	7.19	9.40	14.75	24.77
Urban		0.50	0.76	1.20	1.67	2.99	5.74
Fata	27.22	**1.33**	**1.85**	**2.49**	**2.20**	**3.18**	**4.99**
Rural		1.33	1.82	2.48	2.20	3.09	4.85
Urban		-	0.02	0.01	-	0.09	0.14
Punjab	205.35	**20.54**	**25.46**	**37.61**	**47.29**	**73.62**	**109.99**
Rural		16.97	19.99	28.42	34.24	50.60	69.44
Urban		3.57	5.48	9.18	13.05	23.02	40.55
Sindh	140.91	**6.05**	**8.37**	**14.16**	**19.03**	**30.44**	**47.85**
Rural		4.28	5.20	8.43	10.79	15.60	23.02
Urban		1.77	3.17	5.73	8.24	14.84	24.83
Balochistan	347.19	**1.17**	**1.35**	**2.43**	**4.33**	**6.57**	**12.34**
Rural		1.02	1.13	2.03	3.66	5.00	8.93
Urban		0.14	0.23	0.40	0.68	1.57	3.41
Islamabad	0.91	**0.10**	**0.12**	**0.24**	**0.34**	**0.81**	**2.00**
Rural		0.10	0.12	0.16	0.14	0.28	0.99
Urban		-	-	0.08	0.20	0.53	1.01

Population by Urban/Rural Breakdown (% share) of Administrative Units
Censuses : 1951-2017

Name of Administrative Unit	Area in '000' Sq.km	Population (% share)					
		1951	1961	1972	1981	1998	2017
1	2	3	4	5	6	7	8
Pakistan	796.10	**100**	**100**	**100**	**100**	**100**	**100**
Rural		82.26	77.48	74.59	71.70	67.48	63.56
Urban		17.74	22.52	25.41	28.30	32.52	36.44
Khyber Pakhtunkhwa	74.52	**100**	**100**	**100**	**100**	**100**	**100**
Rural		88.92	86.76	85.75	84.94	83.13	81.20
Urban		11.08	13.24	14.25	15.06	16.87	18.80
Fata	27.22	**100**	**100**	**100**	**100**	**100**	**100**
Rural		100.00	98.67	99.47	100.00	97.31	97.20
Urban			1.33	0.53		2.69	2.80
Punjab	205.35	**100**	**100**	**100**	**100**	**100**	**100**
Rural		82.63	78.50	75.58	72.40	68.73	63.14
Urban		17.37	21.50	24.42	27.60	31.27	36.86
Sindh	140.91	**100**	**100**	**100**	**100**	**100**	**100**
Rural		70.76	62.15	59.55	56.68	51.25	48.11
Urban		29.24	37.85	40.45	43.32	48.75	51.89
Balochistan	347.19	**100**	**100**	**100**	**100**	**100**	**100**
Rural		87.62	83.12	83.55	84.38	76.11	72.38
Urban		12.38	16.88	16.45	15.62	23.89	27.62
Islamabad	0.91	**100**	**100**	**100**	**100**	**100**	**100**
Rural		100.00	100.00	67.74	39.94	34.28	49.63
Urban				32.26	60.06	65.72	50.37

GOVERNMENT OF PAKISTAN
MINISTRY OF INTER PROVINCIAL COORDINATION
(Secretariat of Council of Common Interests)

No.2(24)/2020-CCI   Islamabad, the 16ᵗʰ April, 2021

Subject: **DECISIONS OF THE 45ᵗʰ MEETING OF THE COUNCIL OF COMMON INTERESTS (CCI).**

The 45ᵗʰ meeting of the Council of Common Interests (CCI) was held on 12ᵗʰ April, 2021, in the Prime Minister's House, Islamabad.

2.   The Decision(s) of the meeting, duly approved by the Prime Minister /Chairman, CCI, are circulated herewith, in terms of rules 6 and 11 of the Rules of Procedure of the CCI, 2010, for necessary action and implementation.

3.   Action to implement the aforesaid decision(s) should be initiated under intimation to this Secretariat accordingly.

4.   The enclosed certificate of acknowledgment of receipt of the CCI's Decision(s) may be returned, duly completed and signed.

(Syed Mudassar Hussain Shah)
Section Officer (CCI)
Ph: 051-9103532

1.	Secretary, Planning, Development and Special Initiatives Division	Case No.CCI.1/2/2021
2.	Secretary, Election Commission of Pakistan	Case No.CCI.1/2/2021
3.	Chief Secretary, Punjab	Case No.CCI.1/2/2021
4.	Chief Secretary, Sindh	Case No.CCI.1/2/2021
5.	Chief Secretary, Khyber Pakhtunkhwa	Case No.CCI.1/2/2021
6.	Chief Secretary, Balochistan	Case No.CCI.1/2/2021

Cc:

1) SPS to Secretary, IPC Division, Islamabad.
2) Section Officer (Progress), IPC Division, Islamabad.

(Syed Mudassar Hussain Shah)
Section Officer (CCI)
Ph: 9103532

| Case No.CCI.1/2/2021
Dated 12.04.2021 | Approval of Results of the 6th Population
and Housing Census, 2017 |

DECISION

16.   The CCI decided to approve the Final Results of the 6th Population and Housing Census, 2017 in the larger national interest. The Decision was taken by majority vote, in terms of Rule 5(10) of the Rules of Procedure of the Council of Common Interests, 2010, as seven members supported the approval of Final Census Results while the Chief Minister Sindh opposed it. The CCI directed that the process of next Census should start as early as possible according to international best practices by using latest technology.

Government of Pakistan
Ministry of Planning Development & Special Initiatives
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Islamabad, the 22nd February, 2021

NOTIFICATION

No.Census/PD&SI(1)/20-72 :- In continuation of earlier notification of even no. dated 29th December, 2020, the Competent Authority has been pleased to reconstitute the **Committee for Recommendations & Adoption of Best Practices for Upcoming Population Census** with immediate effect. The composition of the Committee will be as under:

1.	Mr. Muhammad Jehanzeb Khan, Deputy Chairman Planning Commission	**Chairman**
2.	Mr. Muhammad Ahmed Zubair, Chief Economist	Member
3.	Mr. Muhammad Sarwar Gondal, Member (Support Services)	Member/Secretary
4.	Dr. G. M. Arif, Independent researcher	Member
5.	Dr. Muhammad Nizamuddin, Independent researcher	Member
6.	Dr. Zeba A. Sathar, Demographer, Country Director, Population Council	Member
7.	Dr. Syed Muhammad Arif, Retd. Professor, University of Balochistan	Member
8.	Dr. Durr-e-Nayab, Demographer, Joint Director/Director Research, PIDE	Member
9.	Dr. Ayesha Shiraz, Demographer, Senior Fellow, NIPS	Member
10.	Mr. Usman Javaid, DG (Projects), NADRA	Member
11.	Dr. Sanam Wagma Khattak, Demographer, University of Peshawar	Member
12.	Khawaja Mazhar Jamal, GIS / Geography specialist	Member

The Terms of Reference of the Committee are as under:

i) to review the census process, data collection and field operation methodologies used for Census 2017 & recommend the modern methodologies being adopted for censuses in region & globe for conduct of upcoming census

ii) to compare the regional/globally adopted census questionnaires and proposals for improvement

iii) to review mode of Data Collection (Manual /Electronic) for provision of timely & credible results & recommendation for adoption of innovative tools & technologies for geo referred enumeration up to the household level for upcoming census

iv) to review the best practices of field operations including monitoring/supervision & data processing to minimize the omissions/ errors and complete coverage

v) to devise strategy for confidence building measures of all stakeholders for smooth completion of census operations and for increasing reliability & credibility of census results

(Dr. Arshad Mehmood)
Section Officer

The Manager,
Printing Corporation of Pakistan Press,
Islamabad

Copy forwarded to:
1. Minister for Planning, Development and Special Initiatives
2. Deputy Chairman, Planning Commission
3. Secretary to the Prime Minister
4. Secretary Planning Development & Special Initiatives
5. All members of the committee
6. Principal Information Officer, Press Information Department, Islamabad

(Dr. Arshad Mehmood)
Section Officer

Director PSLM/90
Diary No. 23
Dated 24-2-21

GOVERNMENT OF PAKISTAN
SECRETARIAT OF THE COUNCIL OF COMMON INTERESTS
5th Floor, Kohsar Block, Pak. Secretariat

No.2(12)/2021-CCI(49th)   Islamabad, the 1st March, 2022

Subject: **DECISIONS OF THE 49th MEETING OF THE COUNCIL OF COMMON INTERESTS (CCI).**

I am directed to state that the Decisions of 49th meeting of the CCI held on 13.1.2022, duly approved by the Prime Minister/Chairman, CCI, were circulated to all Members of CCI and concerned stakeholders, on 26.01.2022, in terms of Rule 6, 11 and 12 of Rules of Procedure of CCI.

2.   In response, the Minister for Planning, Development and Special Initiatives, requested that the decision of 49th CCI meeting at Para-16 in Case No.CCI.1/1/2022 dated 13.01.2022, titled *"Approval of Recommendations for Conduct of 7th Population & Housing Census"* may be corrected as follow:-

CCI Decision circulated on 26.01.2022	Correction proposed by Ministry of Planning, Development and Special Initiatives in the Decision
16. The CCI also approved Census Work Plan with timelines, Census Questionnaire, Census Monitoring Committee and its ToRs with the stipulation that Secretary, Finance Division and representative of Sindh (Mr. Mehtab Karim) shall be included as member and the committee will be notified accordingly.	16. The CCI also approved Census Work Plan with timelines, Census Questionnaire, Census Monitoring Committee and its ToRs with the stipulation that Secretary, Finance Division in the Census Monitoring Committee, while name of Mr. Mehtab Karim as representative of Sindh may be included in the Census Technical/Expert Committee to be constituted for preparation of census technical activities as per best international practices.

3.   In terms of Rule-12 of the Rules of Procedure of the CCI, 2010, orders of the Prime Minister/Chairman, CCI, were solicited. The Prime Minister, in his capacity as Chairman, CCI, has been pleased to approve the above mentioned corrections, in terms of Rule 12 of the Rules of Procedure of the CCI, 2010.

4.   Accordingly, the Decision at Para-16 of the minutes of the 49th meeting of the CCI circulated vide this Secretariat's letter of even number dated 26th January, 2022, stands modified to the above extent. A corrected copy of the decision is enclosed herewith for information, record and further necessary action by all concerned.

5.   Action to implement the aforesaid decision(s) should be initiated under intimation to this Secretariat accordingly.

(Dr. Mir Aijaz Hussain Talpur)
Joint Secretary (CCI)
Ph: 051-9103518

1.	Secretary, Planning, Development and Special Initiatives Division	Case No.CCI.1/1/2022
2.	Chief Secretary, Punjab	Case No.CCI.1/1/2022
3.	Chief Secretary, Sindh	Case No.CCI.1/1/2022
4.	Chief Secretary, Khyber Pakhtunkhwa	Case No.CCI.1/1/2022
5.	Chief Secretary, Balochistan	Case No.CCI.1/1/2022

Cc:

1) Section Officer (Progress), CCI Secretariat, Islamabad.

(Syed Mudassar Hussain Shah)
Section Officer (CCI)
Ph: 9103532

AGENDA ITEM No. 1:

Case No.CCI.1/1/2022 Dated 13.01.2022	Approval of Recommendations for Conduct of 7th Population & Housing Census

DECISION

15.   The CCI considered the Summary titled "**Approval of Recommendations for Conduct of 7th Population & Housing Census**" dated 16th December, 2021, submitted by Ministry of Planning, Development and Special Initiatives and approved the recommendations of Census Advisory Committee for conduct of 7th Population & Housing Census 2022.

16.   The CCI also approved Census Work Plan with timelines, Census Questionnaire, Census Monitoring Committee and its ToRs with the stipulation that Secretary, Finance Division in the Census Monitoring Committee, while name of Mr. Mehtab Karim as representative of Sindh may be included in the Census Technical/Expert Committee to be constituted for preparation of census technical activities as per best international practices.

17.   It was also decided that the Census process should be completed in 18 months/540 days as per timeline discussed in para 7 above. Results of the 7th Population & Housing Census should be furnished to the Election Commission of Pakistan for delimitation for the next General Elections due to be held in 2023. Quarterly progress report must be submitted to CCI by Ministry of Planning, Development and Special Initiatives. The Chief Minister Sindh also agreed with the proposals except using the de-jure method and instead expressed his preference for employing the de-facto method for the Census.

Consultative Meetings with Provinces on Census-2022

Province	Date	Main Decisions
Punjab	6th September, 2021	• The census questionnaire will be shared with stakeholders and departments, and finalized after their feedback. • All provincial departments will extend their support/cooperation to the PBS in conducting the Census-2022.
Sindh	8th September, 2021	• Census questionnaire and informative videos would be translated into regional languages. • Bureau of Statistics Sindh will be engaged in the upcoming census and will be given representation in the technical committees. • Comprehensive recommendations from the province will be shared with PBS after consultation with political leadership.
Balochistan	10th September, 2021	• Assured full support in terms of provision of field staff and administrative arrangements for successful conduct of census.
Khyber Pakhtunkhwa	13th September, 2021	• PBS assured that all the feedback regarding the process and tools will be incorporated in the recommendations after completion of all consultations.
Gilgit-Baltistan	16th September, 2021	• It is recommended that all stakeholders must be consulted on relevant matters. • District administration may be taken on board and part of committees for coordination.

S. No.	Software Modules	Brief Description
1.	Self-enumeration web portal	An individual can register itself. The registration process will be completed after verification of UTN (Unique Token Number) received via SMS. The individual can enter information himself/herself. Information can be updated and visualized by himself/herself.
		This will be a web based portal. All basic information can be visualized on this portal. The dashboard will contain role based access.
2.	HR & Task Assignment Web Portal	It is a web based portal. User can register field staff. System can facilitate role based access and task assignment. Information can be viewed based on areas. The module will contain Super user. Assignment of task and geographical area will be handled in this module in addition to team management.
		This will allow the administrators to manage the census ERP at respective level.
		Users can visualize resources information and hierarchies of staff (PBS, NADRA and Local Administration), role and status of training.
		This application will be based on GIS. Supervisor can monitor respective enumerators. Alerts, Block coverage and History will be prominent features.
3.	Training Web portal	User can enter assign Master trainer, trainer and trainee. Location, duration and training schedule can be entered. This Module will be used to train PBS officials and field staff. This will cover reading material, video tutorials and live chats with concerned officials.
		Portal will contain training audio/video tutorials. The portal will be role based and learning progress can be visualized on individual levels. Alerts/notification can be generated automatically.
		This will also include training evaluation feature. In addition to above, this module will also have record management of training material & equipment integrated with inventory as well as staff integration with HR module
4.	Inventory Management	Procurement like tablet and allied accessories can be entered / update and issued/retrieved. Upon issuing the

S. No.	Software Modules	Brief Description
		devices, inventory will be updated. This module will have record of all the equipment and available facilities handed over to respective Census Support Centers.
5.	Android House listing App	This will be an android based application. This application is a GIS application and enumerator can geo tag houses and building. Alerts can be generated on in/out from relevant blocks. The use of artificial intelligence may be used to ensure that all structure have been geo tagged.
		Instant messaging features (unicast, multicast and broadcast) will be provided in this application. Field staff, office staff, supervisor and HQ authorities will be used this for instant messaging.
6.	Android Enumerator Data Collection app	This will be an android based application. Enumerator can collect household information or validate information entered during self-enumeration process. The application can work on offline mode. Alerts can be generated on in/out from relevant blocks.
		Instant messaging features (unicast, multicast and broadcast) will be provided in this application. Field staff, office staff, supervisor and HQ authorities will be used this for instant messaging
7.	Communication application	Centralized communication and response system for census staff including enumerators, supervisors, PBS (support centre, Regional office and HQ) staff , training staff, NADRA, SUPARCO, NTC staff and others
8.	Area Frame Updation Application	This module will help the officials from head quarter to update the area framework if required in interactive manner.
9.	GIS based Dashboard Monitoring System	This will be GIS web based application. Authorities can visualize census progress. The application will contain role based access.
10.	Dashboard for Trend Analysis	This module will allow viewing the real-time statistics based on synced data. Information can be viewed on area level. The application will facilitate role based access.
		This will show different indicators spreads for high level officials of PBS
11.	Data Cleaning Module.	This Module will allow viewing & rectifying inconsistency in synced data with set of rules. This

S. No.	Software Modules	Brief Description
		application will remove anomalies, inconsistency and noise from data synced.
12.	Complaint Management System	This Module will allow the general public as well as field staff to Log a complaint/query regarding any issue they face during the census activity. These complaints/queries will be forwarded to concerned officials as per their hierarchy. Officials will be able to answer their complaint or forward these complaints to the concerned officials via this module. It will also keep track of complaint records, official's replies etc.
13.	Reporting Module	This module will be able to show the reports in PDF, Excel, CSV formats. User may be given a facility to customize the reports dynamically as per his needs.
14.	Public Data Dissemination Portal	To store / archive data of different types. Allows the researchers etc. to download data as per their needs.
15.	CATI support module	This will be used for quality assurance of census data during field operations. Post enumeration data quality assurance through telephonic communication connected with an interactive dashboard
16.	MDM	Mobile Device Management module for controlling tablets. This is used for preloaded imagery, Event/Crash/Exception reporting and resolution. Updation of application on the enumerator tablet remotely.
17.	Monitoring /Supervisor Dashboard	This will show different indicators spreads for high level officials of PBS
18.	Data Synchronization	In order to improve security, this module will be used to synchronize data from Data collection and House listing App to servers. All completed forms will be handed over to the data synchronization to be kept encrypted until synchronized to the server.

Government of Pakistan
M/o Planning, Development & Special Initiatives
Pakistan Bureau of Statistics
Statistics House, 21-Mauve Area, G-9/1,
Islamabad
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DDG (CP&C)
Ph. No. 051-9106581
Fax No. 051-9106548

rabia.awan@pbs.gov.pk

No. PBS.CP&C/CPMU.1(3)/2021

Islamabad dated 10ᵗʰ May, 2022

Subject: **PROVISION OF SPACE FOR ESTABLISHMENT OF CENSUS SUPPORT CENTRE AT CENSUS DISTRICT FOR CONDUCT OF DIGITAL CENSUS 2022**

In continuation of this office letter of even number dated 30ᵗʰ March, 2022 on the subject noted above (copy enclosed)

2.   It is informed that Council of Common Interest (CCI), in its 49ᵗʰ meeting held on 13ᵗʰ January, 2022 approved to conduct of 7ᵗʰ Population & Housing Census-2022 and also approved the timelines to complete the whole process within the stipulated timelines. Resultantly the preparation of 7ᵗʰ Population & Housing Census is in full swing, Gazette Notification regarding conduct of 7ᵗʰ Population and Housing Census-2022 along with Census Questionnaire, Work Plan and Census Monitoring Committee vide S.R.O508(I)/2022 date 5ᵗʰ April, 2022 has been notified, copy already sent to the Provincial Governments.

3.   As per recommendation of Census advisory Committee Census Support Centre has to be established at each census district level for smooth conduct of 1ˢᵗ ever digital census. The Census District Officer (CDO) will be incharge of the Census Support Centre. The Centre will be equipped with necessary IT equipment's, furniture's and technical staff for provision of support to technical field staff. During conduct of digital census the centre will also work as complaint centre, for this purpose PBS will provide following items/budget:

- Furniture / Fixture (three tables alongwith chairs, two visiting chairs and Almirah)
- Laptop/Printer and Internet device for PBS employees
- Rs. 50,000 will be provided for stationary and Rs. 50,000 will be provided for other store items to each CDO for smooth functioning of Census Support Centre

An appropriate neat and clean space having minimum size of 120 sq ft with the following facilities is also required to be provided by the District Administration:

- Electricity etc.
- Availability of Drinking Water

4.   In view of the above, it is once again requested that the Census District Officers may please allocate space for Census Support Centre up to 20ᵗʰ May, 2022 so that the conduct of 7ᵗʰ Population and Housing Census activities may not be hampered.

(Rabia Awan)
o/c

Distribution:
i.   All Deputy Commissioner of Balochistan, AJK, GB and merged District of FATA in KP and ICT Islamabad
ii.   All Assistant Commissioner of Punjab, Sindh and Khyber Pakhtunkhwa provinces
iii. All Cantonment Executive Officer of Punjab, Sindh, KP and Balochistan
iv.   MD, Cholistan Development Authority (Census District Officer)

Copy for Information to :
a. SPS to Secretary, PD&SI, Islamabad
b. Chief Secretary, Punjab, Sindh, KP and Balochistan, AJK and GB
c. Secretary, LG&RD Punjab, Sindh, KP and Balochistan, AJK and GB
d. PS to Chief statistician, PBS, Islamabad
e. All Divisional Commissioner / Divisional Census Coordinator
f. Provincial Incharge of Lahore, Karachi, Peshawar and Quetta
g. CSO (Incharge) of Regional / Field offices with the direction to convey a copy of said letter to all concerned
h. APS to Member (SS/RM), PBS, Islamabad
i. APS to Member (C&S), PBS, Islamabad

REGISTERED

No.PBS.CP&C/CPMU.1(3)/2021
Government of Pakistan
Ministry of Planning, Development & Special Initiatives
PAKISTAN BUREAU OF STATISTICS
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Member (SS/RM)
Ph: 9106652

Islamabad, the 30th March, 2022

Subject:- **APPOINTMENT OF CENSUS FIELD STAFF FOR 7th POPULATION AND HOUSING CENSUS.**

Reference this office letter of even number dated 16-12-2021 on the subject captioned above, wherein, Chief Secretaries of respective Provinces were sensitized regarding requirement of Census field staff i.e. Charge Superintendents, Circle Supervisors and Enumerators for their timely appointment upto 31st March, 2022. Further they were requested to issue directives for initiation for nomination / appointment of Census field staff including 5% reserve staff (Copy enclosed).

2.   In this regard, keeping in view first ever "*Digital Census*" of the country, in which data will be collected through Tablet, beside Geo-Tagging of all structures, therefore, IT literate staff will be engaged for Census field operation. However, it has been decided that appointment of reserve staff may be increased from 5% to 10% for Census field duties. The staff of PBS has been deployed / posted at District and Tehsil level for close liaison with Local Government. The deployed staff has reported that "Census Support Center" has not been established yet and specific place for the purpose has not been allocated at some Census Districts. It is emphasized that allocation of space / establishment of "*Census Support Center*" is essential for smooth functioning of Census work.

3.   It is, therefore, requested that Census staff along with 10% reserve staff may be appointed for field operation of Digital Census – 2022 and suitable place / area for the "Census Support Center" may be allocated.

4.   Appointment of Census field staff for 7th Population & Housing Census and allocation / establishment of "Census Support Center" shall be highly appreciated.

(Muhammad Sarwar Gondal)

DISTRIBUTION:

a) Deputy Commissioners /
b) Assistant Census Commissioners /
c) Cantonment Executive Officers /
d) MD, Cholistan Development Authority /
    (Census District Officers).

Copy for information to:-

1) SPS to Secretary, PD&SI
2) Chief Secretary, Punjab, Khyber Pakhtunkhwa, Sindh, Balochistan, Azad Jammu Kashmir and Gilgit Baltistan.
3) PS to Chief Statistician, PBS Islamabad.
4) APS to Member (C&S), PBS Islamabad.
5) DDG (CPMU), PBS Islamabad.
6) Divisional Commissioners,
7) Divisional Coordinators.
8) Provincial Incharges of Lahore, Karachi, Peshawar & Quetta.
9) Chief SO / SO (Incharges) of Regional / Field Offices of PBS with the direction to convey a copy of said letter to all concerned.

Government of Pakistan
M/o Planning Development & Special Initiatives
Pakistan Bureau of Statistics
Islamabad
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PNC. Census /PD&SI (4)/2021- Questionnaire   Islamabad dated 1ˢᵗ September, 2021

NOTIFICATION

In the light of the decisions of 7th Meeting of the Committee constituted for recommendation and adoption of best practices for upcoming Census held on 15th July, 2021, the following Committee constituted for finalization of Census Questionnaire for 7th population & Housing Census, the first ever **"Digital Census"** of Pakistan.

Sl.	Name & Designation	Status
1	Dr. G. M. Arif, Demographer	**Chairman**
2	Dr. Zeba A. Sathar, Demographer	Member
3	Dr. Nousheen Mehmood, Demographer	Member
4	Dr. Touseef Ahmed, Demographer	Member
5	Muhammad Saeed Ex-Census Commissioner, PBS	Member
6	Professor Dr. Muhammad Iqbal, University of Peshawar	Member
7	Dr. Durr e Nayab, Joint Director PIDE	Member
8	Dr. Aysha Sheraz, Senior Fellow, NIPS	Member
9	Mr. Muhammad Sarwar Gondal (Consultant on Digital Census), PBS, Islamabad	Member
10	Mr. Ayazuddin, Member (C&S), PBS, Islamabad	Member
11	Mr. Muhammad Bashir Janjua, Joint Census Commissioner PBS, Islamabad	Member
12	Ms. Rabia Awan, Director (CP&C), PBS, Islamabad	**Member / Secretary**
13	Mr. Muhammad Saeed, ACC (DP), PBS, Islamabad	Member

The Terms of Reference of the Committee are as under: -

- The committee will finalize the questionnaire in the light of the recommendations of the committee constituted for recommendations and adoption of best practices for upcoming census at earliest possible time.

The recommended questionnaire will be then shared with Provinces for their feedback to finalized the final questionnaire.

(AYAZUDDIN)
Member (Census Surveys /RM)

Distribution: -
All Concerned

Government of Pakistan
M/o Planning, Development and Special Initiatives
Pakistan Bureau of Statistics
Islamabad

Subject: - **MINUTES OF MEETING OF CENSUS QUESTIONNAIRE COMMITTEE CONSTITUTED FOR FINALIZING THE CENSUS QUESTIONNAIRE FIRST EVER DIGITAL POPULATION AND HOUSING CENSUS - 2022 OF PAKISTAN**

A meeting of Census Questionnaire Committee, constituted to review/ finalize the questionnaire for first ever digital Population and Housing Census - 2022 of Pakistan, was held on **29th September, 2021 (Wednesday) at 12:00 PM** in the Conference Room of Pakistan Bureau of Statistics (PBS), Islamabad under the chairmanship of Dr. G. M. Arif, Demographer. All Members/ Participants from outside PBS joined the meeting virtually on zoom. The meeting was started with the recitation of the Holy Quran. The list of participants is attached at **Annex-I.**

2.   Mr. Sarwar Gondal, Consultant/Focal Person on Digital Census-2022 and Member / Secretary, Census Advisory Committee welcomed all the members of the Census Questionnaire Committee and informed all the esteemed members regarding the finalization of recommendations of the "Census Advisory Committee" particularly on census questionnaire for upcoming census. He added that the major recommendations of the committee were to administer the single census questionnaire as short as possible which is strictly in relevance to the objectives of census to get the quality and relevant data and to constitute a technical committee of experts to deliberate in detail on contents and wordings of the questionnaire. Accordingly, as per recommendations of the committee the technical committee for the questionnaire has been constituted with mandate to prepare the questionnaire for the Census 2022. He also informed that PBS team has drafted a questionnaire as per the recommendations of the committee which was emailed to all members before meeting for detailed deliberations and their valuable feedback in the committee meeting. He then requested to Dr. G.M. Arif, Chairman of the Census Questionnaire Committee to proceed further.

3.   The worthy chair while initiating the meeting, thanked all members for attending the meeting. He then requested all esteemed members to give their views regarding the use of single questionnaire or two separate questionnaires (short & long) for upcoming census. In this regard all worthy members agreed to administer the single questionnaire with most relevant questions due to challenging timelines of the Census 2022 and due the fact that mortality and fertility data from census has never been used for any projections. The worthy chair also endorsed the single questionnaire to get the pertinent information in the short time available for census 2022 and was of view that PBS may use two separate questionnaires in 8th Population & Housing Census.

4.   He appreciated the efforts of PBS team for drafting questionnaire for upcoming digital census of Pakistan and requested Ms. Rabia Awan, Director (CPMU/ CP&C), PBS Member/ Secretary of committee to give a detailed presentation regarding the questionnaire and the objectives of the Population & Housing Census. Director, PBS briefed the members that PBS has drafted this questionnaire after comprehensive comparative study of census questionnaire used in region/ globe and also analyzing in detail the previous census questionnaires used in Pakistan. She added that all the

recommendations of the Advisory Com   pt in mind while preparing the draft questionnaire. The detailed comparati\   questionnaires was presented to inform the worthy members regarding _____ topics and number of questions needed. It was also informed that on the verdict of Apex court of Pakistan, the question on *Transgender* was added in the questionnaire during Census operation 2017. Whereas, none of the countries of the globe captured the information on *Transgender in their census, however,* India is going to capture the same information in its census 2021 as a third gender. While presenting the draft questionnaire, she informed as per studies, disability has been part of the questionnaire and migration and employment related questions are added, further on the basis of recommendations of the Technical committee of the governing council for census 2017 and feedback pf different stakeholders, categories are added in the religion, languages and Nationality variables to capture them more precisely as per requirements.

5.   After presentation, the chair while opening the floor for feedback/ comments of the honorable members was of view that we must not increase the questionnaire size and may look in to possibilities of amending the questions to get the required information. Further it was decided that initially the individual level information questionnaire will be deliberated in detail and after its finalization, discussion on Housing part will be made.

- **Dr. Zeba Sathar, Country Director, Population Council, Islamabad,** was of view that the input from PBS has much better and in this regard work of whole team of PBS must be appreciated. She broadly agreed on the topics of the questionnaire, however, she strongly of view that questions may be designed precisely to get the required information. She was of view that single disability question does not serve the purpose, either questionnaire designed by Washington group on Disability Statistics may be used or two or three questions may be designed to capture the prevalence and type of disability for proper planning. The worthy chair at that point suggested that the committee may consider the three questions on disability included in Indian census questionnaire for the year 2021 for incorporation.

- **Dr. Touseef Ahmed, Demographer** was of view that Washington group of questionnaire for disability was added in PDHS questionnaire, which includes 5 to 7 questionnaires, if included in census, it will not only increase the questionnaire size but also need extensive training therefore will be better that committee may design to three questions on disability themselves keeping in view the questions used in other countries. He was also of view that questions on employment may be removed as employment data at district level is also available from Labour force statistics.

- **Dr. Durr-e- Nayab, Demographer, Joint Director PIDE,** agreed that two to three questions may be added for disability but she strongly advocated the case of inclusion of employment variables in the census questionnaire for studying the patterns up to the lowest level for effective policy & planning.

- **Professor Dr. Muhammad Iqbal, University of Peshawar,** was of view that while designing questionnaire, we may consider the ground realities of our country as every country has their own requirement. Further the questionnaire must be simple as possible for capturing the accurate and quality information. He endorsed the view point of chair for including two to three disability questions as asked in Indian census 2021

- **Mr. Muhammad Saeed, Ex-Census Commissioner PBS** was of view that committee may work on designing shortest and relevant questionnaire for census, however he was of view that questions on the employment are difficult to comprehend, therefore may be rephrased for giving clear concept to get required data. He further added that PBS has added three new columns for getting the date of birth before the age in completed months, this additional information in terms of month and day of birth can be skipped to add questions on disability and to manage the questionnaire size to required limit as this information will not add any value to the data.

- Mr. Muhammad Saeed, ACC, PBS informed that the extra columns were added to address the issues of age heaping faced in previous census. The chair and other committee members deliberated in detail on age heaping and were of view that age heaping is always there and there are modern techniques to correct it along with proper training and probing techniques. Further the inclusion of such columns can never guaranteed the data without age heaping issue. All committee members agreed to drop the extra columns of day and month of birth and include two to three disability questionnaires

5   During deliberation on the other questions, it was informed by Director PBS that question related to CNIC obtained of 18-Years and above population existed in Census-2017 questionnaire have been proposed to be excluded from the draft as this information is already available with NADRA and have not given any significant added information in census 2017. While discussing on migration's columns, it was proposed by committee members that one more question should be added to capture the status of migration from Rural or Urban domain. Regarding question on marital status all committee members were in conformity to report only age 10 years and less as unmarried rather increasing the limit to 16, as this may underreport the younger marriages contrary to the ground realities. The education categories for capturing the enrolment and education level were discussed in detail and it was proposed to revisit the categories to make them simple.

6   In the end, the Chair also highlighted that the explanation given for the column 1 for identification of household members is quite confusing and may mislead the enumerators.   All the committee members agreed with the observation and were of view that this is the most important explanation which will clearly define the enumeration methodology (De-jure/De-facto) and inclusion/exclusion of the household members in the census., therefore comprehensive work must be done to rephrase the question for capturing the population as per proposed De-jure methodology and to avoid confusion in the field. The chair also was of view that the rural urban definitions adopted by PBS (as per local governments/ revenue department definitions) for census are unable to capture the increasing urbanization patterns, therefore it is proposed that PBS may study the Indian census, where they have used three definitions to identify the urban areas according to as per revenue definitions and as per some specific characteristics. This helped to ascertain the extent of urbanization. Dr. Zeba Sathar will share in the next meeting the findings of a study on urbanization to show the use of urban definition by the European Commission.

7.   After detail deliberations the following decisions were made:

Decisions:

- Single questionnaire may be administered, strictly in relevance to census objectives.
- The explanation of Col 1 for exclusion / inclusion of household members may be rephrased to give clarity and avoid confusion.
- Two to three questions on disability may be asked to capture prevalence and type of disability
- The lowest age limit for asking marital status must be 10 years and above to capture the responses at maximum level.
- The additional columns of day and month of birth must be skipped and age should be asked in complete years.
- To capture the status of migration from Rural or Urban domain, one more question should be added in the questionnaire.
- Revisit the field of Education in terms of field of education.
- Revisit the definition of 'urban' for the next census.

8.   Meeting was ended with vote of thanks to and from the chair.

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List of Participants

SI.	Names & Designation	Status
1	Dr. G.M. Airf, Demographer	Chairman
2	Dr. Zeba A. Sathar, Demographer	Member
3	Dr. Nousheen Mehmood, Demographer	Member
4	Dr. Tauseef Ahmed, Demographer	Member
5	Muhammad Saeed, Ex-Census Commissioner PBS	Member
6	Professor Dr. Muhammad Iqbal, University of Peshawar	Member
7	Dr. Durr-e-Nayab, Joint Director PIDE	Member
8	Dr. Aysha Sheraz, Senior Fellow, NIPS	Member
9	Mr. Muhammad Sarwar Gondal (Consultant/Focal Person on Digital Census), PBS, Islamabad	Member
10	Mr. Ayazuddin, Member (C&S), PBS, Islamabad	Member
11	Mr. Muhammad Bashir Janjua, JCC, PBS, Islamabad	Member
12	Ms. Rabia Awan, Director (CP&C), PBS, Islamabad	Member/ Secretary
13	Mr. Muhammad Sarfaraz, CSO (DD&SS), PBS, Islamabad	Coordinator
14	Mr. Saeed Ahmed, ACC (DP), PBS, Islamabad	Member

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Islamabad
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Subject: - **MINUTES OF MEETING OF CENSUS QUESTIONNAIRE COMMITTEE CONSTITUTED FOR FINALIZING THE CENSUS QUESTIONNAIRE FIRST EVER DIGITAL POPULATION AND HOUSING CENSUS - 2022 OF PAKISTAN**

The 2nd meeting of Census Questionnaire Committee, constituted to review/ finalize the questionnaire for first ever digital Population and Housing Census - 2022 of Pakistan, was held on 28ᵗʰ **October, 2021 (Thursday) at 03:00 PM** in the Conference Room of Pakistan Bureau of Statistics (PBS), Islamabad under the chairmanship of Dr. G.M. Arif. All Members (outside PBS) joined the meeting virtually through a zoom. The list of participants is attached at **Annex-A.**

2.   The Chair welcomed all the esteemed members of the Census Questionnaire Committee. Dr. Naeem uz Zafar, Chief Statistician also attended the meeting and appreciated the current progress on Questionnaire. Meanwhile, Chief Statistician requested the chair for further proceedings. The chair desired all members of committee for their views/comments on all variables of questionnaire. All esteemed members enthusiastically participated in the meeting and provided their valuable feedback. Extensive discussion was made on the 1st question and the need to clearly define the exclusion & inclusion criteria, was deliberated keeping in view the *de-jure* methodology, to avoid confusion and to collect accurate & reliable data. All other individual questions were also discussed in detail one by one along with instructions for enumeration of individuals. After detail deliberation, the following decisions regarding changes/amendments in different Columns of the questionnaire were made.

Decisions:

- It was decided that Column no. 1 **"Name of household Members"** must clearly define the exclusion & inclusion criteria keeping in view the adopted *de jure* concept for the next Census. Further, the reference day & time for Census must be explicitly mentioned on the questionnaire instead of reference period. In Column 1, instructions should be separated from the Census Question. The given instructions in Column 1 should include **"entries of females and children must be ensured"**. These details about the Column 1 will also be elaborated in the manual of instructions.

- It was also decided that "period for temporary absence" will be specified for the period of 6 months or more, and will include the term "intend to stay away for 6 months or more" i.e. **"those persons who are living away from their household for 6 months or more within the country or outside the country or intend to stay away for 6 months or more within the country or outside country will not be included"**. It will also be elaborated in the manual of instructions.

- About the question on **"Attendance in Educational Institution"**, Dr. Naushin Mahmood and Dr. Tauseef Ahmed suggested to amend the option as

of **"Attending"** as it would more appropriately explain the purpose of question which will facilitate the respondent to answer with proper understanding of question.

- To address question on **"Level of Education Completed"**, it was suggested to add the option **"or equivalent"** with SSC and HSSC in Code No. 9 and Code No. 10 respectively so that the educational qualification level for the students who have passed **O/A-Levels** or those who have passed any equivalent academic discipline through religious institutions like Madrassas could also be covered. The same will also be elaborated in the manual of instructions.

- The options or categories under the **"Usual Economic Activity During Last 12 Months"** column will be revised to make them consistent with the LFS. It was also decided that the sub-heading of this question, which mentions **"Reasons for not working"**, will be replaced by the sub-heading **"Out of Labor Force"**. It is also in compliance with the wording of Labor Force Survey's questionnaire. Also, proper instructions for the enumerator/data collector should be explained in the manual of instructions.

- To gather information of migrants through question on **"District of Birth"**, it was decided that there is no need for a separate column to cover whether the district of birth is rural or urban. The columns **"Place of Birth"**&**"District of Birth"** may be merged into one column with rural/urban break up using **alpha "R" for rural and "U" for urban** entries so that the data for district of birth as rural or urban may be collected in the same column.

- It was decided that question on **"Duration of Continuous Residence"**, the category/option 10 years & above may be split into 3 more categories with a margin of 5-years i.e. **"10-14, 15-19, 20-24, and 25 & above"**.

- Concerning the question on **"Disability"**, Dr. Zeba A. Sathar pointed out that the question needs more clarity as some of its features might be confusing or unnecessarily added which will affect the quality as well as accuracy of collected data. Further through current question it will not be possible to get information regarding functional limitation. Therefore, it was decided that Dr. Zeba A. Sathar, Dr. Tauseef Ahmed, Dr. Ayesha Sheraz & Dr. G. M. Arif will draft two questions for capturing functional disability within a week and share with PBS & Committee members for onward discussion.

- It was decided that Dr. Durr-e-Nayab will further look into employment question before finalization.

- Questions regarding relationship, gender, age, marital status, religion, mother tongue, nationality, literacy, education and migration were finalized while disability & employment will be finalized after input of esteemed members.

- In next meeting along with disability & employment, housing questions will also be discussed to finalize the questionnaire soon for further preparatory work.

3.   Meeting was ended with vote of thanks from the chair.

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List of Participants

Sl.	Names & Designation	Status
1	Dr. G.M. Arif, Demographer	Chairman
2	Dr. Zeba A. Sathar, Demographer	Member
3	Dr. Noushin Mehmood, Demographer	Member
4	Dr. Tauseef Ahmed, Demographer	Member
5	Mr. Muhammad Saeed, Ex-Census Commissioner PBS	Member
6	Professor Dr. Muhammad Iqbal, University of Peshawar	Member
7	Dr. Durr-e-Nayab, Joint Director PIDE	Member
8	Dr. Aysha Sheraz, Senior Fellow, NIPS	Member
9	Mr. Muhammad Sarwar Gondal (Consultant/Focal Person on Digital Census), PBS, Islamabad	Member
10	Mr. Ayazuddin, Member (C&S), PBS, Islamabad	Member
11	Mr. Muhammad Bashir Janjua, JCC, PBS, Islamabad	Member
12	Ms. Rabia Awan, Director (CP&C), PBS, Islamabad	Member/ Secretary
13	Mr. Muhammad Sarfaraz, CSO (DD&SS), PBS, Islamabad	Coordinator
14	Mr. Saeed Ahmed, ACC (DP), PBS, Islamabad	Member

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Subject: - **MINUTES OF THE 3rd MEETING OF CENSUS QUESTIONNAIRE COMMITTEE CONSTITUTED FOR FINALIZING THE CENSUS QUESTIONNAIRE FIRST EVER DIGITAL POPULATION AND HOUSING CENSUS - 2022 OF PAKISTAN**

The 3rd meeting of Census Questionnaire Committee, constituted to review/ finalize the drafted questionnaire for the first ever **"Digital Population and Housing Census-2022"** of Pakistan, was held on **24th November, 2021 (Wednesday) at 02:30 PM** in the Conference Room of Pakistan Bureau of Statistics (PBS), Islamabad under the Chairmanship of the Dr. G.M. Arif, majority of the honorable members including chair attended meeting physically and remaining attended virtually. Keeping in view the importance of the matter, the worthy Chief Statistician Dr. Naeem uz Zafar also attended the meeting. The list of participants is at **Annexure-A.**

2.   The worthy Chair welcomed the Chief Statistician and thanked all the esteemed members of the Census Questionnaire Committee for taking their valuable time to attend the meeting and for their active participation for improvement in the questionnaire as per the objectives of the Census. The Chair apprised the committee members regarding latest developments on finalizing the questionnaire for upcoming Census and manifested that it was just one step away to finalize the Census questionnaire after further deliberation with all the honorable members. The chair then requested Ms. Rabia Awan, Director(CP&C)/ Member/Secretary of committee to proceed question by question for deliberations and further finalization.   Director (PBS), informed the house that in consequence of the detail deliberations and decisions in the last two meetings, consensus to the great extent had been developed among all the members on almost all the columns/questions of the drafted Census questionnaire. However, as per directions of the committee, amendments have been made in some questions. She then presented the amended drafted questionnaire and detailed discussion were made on the issues discussed/highlighted in the previous meeting aiming at minimizing the chances of error and to make the questionnaire more efficient. In the light of suggestions/recommendations given by the esteemed members, the following decisions were made:-

Decisions:

Individual Questionnaire

- Regarding *Column No. 1*, **Mr. Muhammad Saeed, Ex-Census Commissioner** suggested that the instead of reporting of inclusion criteria in the separate points in Column No. 1, the points should be made part of question as done in previous Census 2017 questionnaire. However, the clarification regarding guests/ visitors without any other usual place of residence may be deleted from both inclusion and exclusion criteria. Further, clarifications for inclusion and exclusion criteria as per proposed de-jure methodology for enumeration may be elaborated in detail in the manual of instructions.

All the members unanimously agreed to the suggestion and the changes were made accordingly.

- **Column No. 2 to 8:** It was informed that these questions were finalized in the last meeting, however rephrasing of couple of columns in the form of questions as directed by Chair have already been done by the PBS. All the members unanimously agreed on these columns.

- Regarding **Column No. 9**, on "Literacy" **Dr. Nousheen Mehmood** suggested to add words **"Plus, Minus"** with **"simple calculation"** in Urdu questionnaire as done in English version of questionnaire. Further same may be clearly explained in the manual of instructions as well for convenience of enumerators. **Dr. Touseef Ahmed** suggested to improve the Urdu translation of question by adding appropriate wording.

- **Column No. 10 to 12** regarding "Educational attainment", "Level of Education" and "Field of Education" were discussed in detail. Dr. Zeba Sathar, Dr. Touseef and the worthy chair was of view that the question regarding **"Field of Education" Col 12** is redundant, as this information is already available through PSLM surveys, therefore can be deleted. However, Mr. Muhammad Saeed, Ex Census Commissioner, Dr. Nousheen Mehmood and Mr. Saeed Assistant Census Commissioner, PBS was of view of retaining the question due to worth of information collected through it. After mutual consensus these column 10 to 11 were finalized, however chair decided that PBS and other colleagues may finalize regarding the inclusion of Col 12 if really needed.

- **Column No. 13 & 14** regarding "Usual Economic Activity during last 12 Months" it was decided that the PBS, Dr. Durr-e-Nayab and the worthy Chair will further work on it and finalize these columns within 2-3 days. The same was done after detail deliberations within two days of meeting and two questions were finalized after mutual consensus.

- **Column No. 15, 16 & 17** regarding "Migration" were also deliberated upon and Mr. M. Sarwar Gondal, Consultant, pointed out regarding **column No. 17 "Reason for Migration"** serial no. 8 **"the law & order"** option must be excluded as it does not depict a positive picture of the Country. All the members appreciated the proposal and endorsed the suggestion, changes were made accordingly.

- It was Informed to the committee members that worthy chair and the Director CP&C attended the National Conference of Community Based Inclusive Development Network (CBIDN) Pakistan regarding **"Inclusive National Census 2022"** where detailed deliberations were made on the disability questions by all the relevant stakeholders of disability organizations to be included in the Census questionnaire and two questions were finalized. The same have been included in the questionnaire. Dr. Zeba. A. Sathar was of view that inclusion of code **"8"** **regarding problems faced in more than one domain** will not able to gauge the severity of problem faced in each domain, therefore **"code 8"** may be deleted and the severity may be asked in each domain. Ms. Rabia Awan informed the house that as questionnaire will be prepared on tablet therefore this can easily be addressed in program and can be asked for each form of functional limitation. All the members shown their pleasure on resolving the issue amicably and

unanimously agreed with proposal of Dr. Zeba. A. Sathar and Ms. Rabia Awan. Accordingly, it was decided that format of the *Column No. 18* regarding **"Functional Limitation/Disability"** may be redesigned as decided to provide quality and relevant data required for policy making.

Questionnaire on Housing

- The entire questionnaire regarding housing characteristics was discussed in detail. Dr. G.M. Arif suggested that the wording of *Column No. 2* must be rephrased and the option **"Transgender"** may be excluded from **"Sex of the ownership of the house"**.
- Mr. Ayazuddin, Member (C&S/RM) suggested to break the categories/codes in *Column No. 4* regarding years for how long the house has been built in to smaller intervals for getting better information. He further suggested about *Column No. 8* regarding **"Source of light"** to remove the word **"lamp"** from **"gas lamp"** in Code no. 4 of the very column. All members agreed to the suggestions.
- Taking *Column No. 11*, Dr. Ayesha Sheraz suggested that the question about **"latrine/toilet"** may be asked as per pattern of **"Kitchen & Bathroom"**. She added that probing about whether the household uses a common latrine/toilet or not is more important as compared to asking about having a common bathroom or not. All the members expressed their consent over the suggestion and endorsed it.

3.   In the end, the chair expressed its satisfaction over the proceedings for finalization of questionnaire. The Chief Statistician also shown gratitude on behalf of PBS to all members for their valuable participation and feedback for finalizing the questionnaire for Census 2022 for collection of most relevant and pertinent information as per objectives of the Census. The worthy chair directed member secretary to incorporate the changes in the questionnaire as decided in the meetings and share with all members before submission to the quarter concerned for further necessary action.

4.   Meeting was ended with vote of thanks to and from the chair.

****

LIST OF PARTICIPANTS OF THE QUESTIONNAIRE COMMITTEE MEETING HELD ON 24TH NOVEMBER 2021

1. Dr. G.M. Airf, Demographer, Renowned Demographer, Chairman Committee
2. Dr. Naeem uz Zafar, Chief Statistician, PBS, Islamabad
3. Dr. Zeba A. Sathar, Demographer, Country Director, Population Council, Islamabad, Member)
4. Dr. Noushin Mehmood, Renowned Demographer, Islamabad (Member)
5. Dr. Touseef Ahmed, Renowned Demographer, Islamabad (Member)
6. Dr. Muhammad Iqbal, University of Peshawar, (Member)
7. Dr. Aysha Sheraz, Senior Fellow, NIPS, Islamabad (Member)
8. Dr. Durr-e-Nayab, Joint Director, PIDE, Islamabad (Member)
9. Mr. Muhammad Saeed, Ex-Census Commissioner PBS, (Member)
10. Mr. Muhammad Sarwar Gondal (Focal Person on Digital Census), PBS, Islamabad, (Member)
11. Mr. Ayazuddin, Member (C&S), PBS, Islamabad, (Member)
12. Mr. Muhammad Bashir Janjua, JCC, PBS, Islamabad, (Member)
13. Ms. Rabia Awan, Director (CP&C), PBS, Islamabad, (Member/Secretary)
14. Mr. Muhammad Sarfaraz, CSO (DD&SS), PBS, Islamabad, (Coordinator)
15. Mr. Saeed Ahmed, ACC (DP), PBS, Islamabad, (Member)
16. Mr. Saqib Sultan Khawar, Statistical Officer (PSLM), PBS, Islamabad
17. Ms. Hina Kanwal, Statistical Officer (PSLM), PBS, Islamabad

SAMPLE

12345678(90)

| 1 |
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Changes in Enumeration Questionnaire for Census–2022

	Changes in existing questions[1]	
1	Q3-What is the Gender of -----	1. Male, 2. Female, **3. Transgender**
2	Q6-What is the religion of ----	1. Muslim, 2. Christian, 3. Hindu, 4. Qadiani/ Ahmadi, **5. Sikh, 6. Parsi,** 7. Others
3	Q7-what is the mother tongue of -----	1. Urdu, 2. Punjabi, 3. Sindhi, 4. Pushto, 5. Balochi, 6. Kashmiri, 7. Saraiki, 8. Hindko, 9. Brahui, 10. **Shina, 11. Balti, 12. Mewati, 13. Kalasha, 14. Kohistani,** 15. Others
4	Q8-what is the Nationality of ----	1. Pakistani, **2. Afghani, 3. Bangali, 4. Chinese,** 5. Others
	Newly added questions[2]	
1	Q10-Ask each person about their educational background, and code as follows	1. Attending currently 2. Attended earlier 3. Never attended
2	Q15-What is the district of birth (with rural/urban breakup) of -----	District Codes: Numeric Values R=rural or U=urban Country Codes (Foreign): Numeric Values
3	Q16-Duration of continuous residence of ----- in present district	1. Less than 1 year 2. 1-year to 4-years 3. 5-years to 9- years 4.10-years to 14-years 5. 15-years to 19- years 6. 20-years to 24-years 7. 25- years and above 8. Since birth (in case of code 8, skip Q17)
4	Q17-Reason of migration from previous district.	1. Study 2. Marriage 3. Moved with head 4. Business 5. Job/Transfer 6. Returned home 7. IDP 8. Due to law & order 9. Natural disaster(Flood, Earth quick etc) 10. Others

---

[1] *Items in bold are added for the questionnaire of Census–2022.*

[2] *These questions were not part of the short questionnaire used for Census–2017.*

5	Q18-Does ---- have difficulty in seeing, hearing, walking/ climbing, communicating/ speaking/ talking, remembering and concentrating, washing/ dressing/ holding/ catching/ writing?	1. No difficulty at all 2. Difficulty in seeing 3. Difficulty in hearing 4. Difficulty in walking/climbing 5. Difficulty in communicating/speaking/talking 6. Difficulty in remembering and concentrating 7. Difficulty in washing/dressing /holding/ catching/ writing 8. Having more than one difficulties
6	Q19-Does --- have this difficulty (…) to some extent, a lot of difficulty or cannot perform the function at all?	1. Some Difficulty 2. A lot of Difficulty 3. Cannot Perform the function at all

حکومت پاکستان
(Digital Census)
پاکستان بیورو آف سٹیٹسٹکس

ادارہ شماریات

	پاکستان	گلی	پاس کوڈ	بلاک کوڈ	بلاک		چارج نمبر

	بنیادی سوالات						تنظیم				معاشی سرگرمی			نقل مکانی		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
												U/R					
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
0																	

حکومتِ پاکستان

ڈیجیٹل خانہ شماری (Digital Census)

پاکستان بیورو آف شماریات
ادارہ شماریات

صوبہ نمبر _____

شہر/دیہہ خانہ	بلاک کوڈ	گھر	عمارت	عمارت کا نمبر

گھرانہ نمبر:

کالم	مدخل
1 — گھرانے کی حیثیت (کمرشل/رہائشی)	1. رہائشی پلاٹ 2. کرایہ پر 3. الاٹ کردہ
2 — گھرانے کی قسم	1. ذاتی 2. کرایہ 3. غیر آباد 4. وقف/رفاہی 5. دیگر وجہ رہائش مفت 6. دیگر
3 — گھر کی تعمیر کا سال	1. کچا 2. پکا 3. لکڑی 4. چھپر 5. خیمہ 6. جھگی 7. کارواں 8. فلیٹ 9. اپارٹمنٹ
4 — عمارت کی عمر	1. زیرِ تعمیر 2. 3 سال سے کم 3.3 سال تا 9 سال 4.4 10 سے 19 سال 5.20 سے 49 سال 6.50 سال سے زیادہ
5 — گھر کی بیرونی دیواریں	1. پتھر/پکی اینٹ/بلاک 2. لکڑی 3. کچی اینٹ/پلاستر 4. پلائی ووڈ/کارڈ بورڈ 5. پری فیبریکیٹڈ (Pre-Fabric) 6. دیگر
6 — گھر کی چھت کی ساخت	1. RCC/RBC 2. سیمنٹ/لوہے کی چادر 3. گارڈر/ٹی آئرن 4. لکڑی/بانس 5. پری فیبریکیٹڈ (Pre-Fabric) 6. دیگر
7 — پینے کے پانی کا ذریعہ	**اندر**: 1. نل/پائپ 2. ہینڈ پمپ 3. کنواں 4. دیگر **باہر**: 5.6. دیگر
8 — روشنی کے لیے استعمال ہونے والا ذریعہ	1. بجلی 2. روشن دان 3. گیس/لیمپ 4. لالٹین 5. شمسی توانائی 6. بائیو گیس (Biomass) 7. دیگر
9 — کھانا پکانے کا ایندھن	1. لکڑی 2. روغنی گیس 3. LPG/LNG 4. مٹی کا تیل 5. کوئلہ 6. بجلی/شمسی 7. دیگر
10 — ٹوائلٹ کی سہولت	1. فلش سسٹم بمع لائن 2. ڈھکا ہوا گڑھا 3. کھلا گڑھا
11 — استعمال ہونے والی سہولت	1. فلش سسٹم بمع لائن 2. ڈھکا ہوا گڑھا 3. کھلا گڑھا
12 — کمروں کی تعداد	1. فلش سسٹم بمع لائن 2. ڈھکا ہوا گڑھا 3. کھلا گڑھا 4. 1 تا 2 کمرے 5. دیگر 6. کھلی جگہ 7. دیگر 8.
13 — استعمال ہونے والی سہولیات (جو موجود ہیں)	1. ٹی وی 2. ریڈیو 3. ٹیلی فون 4. موبائل 5. انٹرنیٹ 6. اخبار

14	13	12	11	10	9	8	7	6	5	4	3	2	1

سالانہ فلو ریکارڈ شیٹ

فہرست خانہ جات

نمبر شمار	عنوان
1-	عارضہ کا علم و درجہ
2-	عارضہ کا ذریعہ
3-	عارضہ کے مریض کی نوعیت
4-	علم و درجہ
5-	علم و درجہ
6-	علم و درجہ
7-	نام/پتہ/کوائف وغیرہ
8-	فون/موبائل نمبر
9-	علاج کی نوعیت
10-	علاج کی نوعیت
11-	PSIC کارڈ نمبر

RECOMMENDATIONS REGARDING TRAINING:

To ensure that the field staff is well trained and understands the questionnaire, the following has been recommended by the Committee:

a. Inclusive Training: Training should be imparted to all individual involved in the Census operations. It should give clarity about all concepts and definition of the questionnaire. Training may be imparted through group of trainees i.e. for IT, Media and for hard copy/manual training.

b. Training including Technological Interventions: Training manual with audio-video clips for each question will be developed to better understand the theme of the questions. Separate video films and presentation for each level may be prepared for training of field staff, supervisory staff and senior management of provincial level.

c. Duration of Training: Training with sufficient time with field visit/practical to make enumerators clearer about the questions.

d. Involvement of Female Trainers: Involvement of more female trainers is recommended to better convey the definition and concept of questions of long form during the filed operation to increase the response rate.

e. Monitoring and Evaluation (of Trainers and Trainees): Mechanism for field training monitoring and evaluation must be developed so that field data collection be completed successfully. The monitoring will enable to filter the trainers suitable to be master trainer and to appoint supervisors in the field.

f. For the effective supervision/monitoring of training:

•   Training be conducted of Supervisors, Charge Superintendents, Census District Officers (CDOs) and member of vigilance teams.

•   Orientation to be arranged for Chief Secretary, Commissioners, Deputy Commissioners and members of coordination committees of Admin Districts, Divisional and Provincial level

•   Local elected people i.e. Councillor, MPA and MNA may also be involved for spot checking during census.

•   PBS officers/officials monitor/supervise training and visit training sessions frequently during training of field staff.

(662)

F.No 14(14)/PBS-II/PDR/2019
GOVERNMENT OF PAKISTAN
PLANNING COMMISSION
MINISTRY OF PLANNING DEVELOPMENT AND SPECIAL INITIATIVES
*****

SUMMARY FOR THE CABINET

SUBJECT: **APPROVAL OF RECOMMENDATIONS FOR CONDUCT OF 7TH POPULATION & HOUSING CENSUS**

The Council of Common Interests (CCI) in its 45th meeting held on 12th April 2021, approved the final results of the 6th Population and Housing Census-2017 (**Annex-I**). The decision was taken by majority vote in terms of Rules 5(10) of the Rules of Procedure of the Council of Common Interests, 2010, as seven members supported the approval of Final Census Results. Chief Minister Sindh opposed it due to certain reservations on the results and forwarded a reference under Article 154(7) of the Constitution to the Chairman Senate and the Speaker, National Assembly of Pakistan for convening a joint sitting of the Parliament (**Annex–II**). Besides approval of Census Results, CCI also decided that "the process of the next census should start as early as possible according to international best practices by using latest technology".

2   A Census Advisory Committee, comprising renowned demographers and experts, under the chairmanship of Deputy Chairman Planning Commission (DCPC) was constituted to devise recommendations for adoption of best practices for the 7th Population & Housing Census (**Annex-III**). The Committee held several meetings and after detailed deliberations recommended that owing to the sensitivity of the matter and to ensure transparency, involvement of all stakeholders, especially provinces, is essential from the initial stages of planning to compilation of census results. Based on these deliberations the Census Advisory Committee has prepared a report and its executive summary (**Annex-IV**).

3. Main recommendations of the Census Advisory Committee are as follows: -

   a. **Compliance with United Nations Principles for Census**: Agreement and engagement of public, individual enumeration, **simultaneity, universality**, small area data, defined periodicity, training, monitoring and evaluation.

   b. **Dedicated Census Unit and Census Master Plan**: Planning unit to address technical and operational issues. Plan on **Project Based approach** with defined work break down structure and activity tracking.

   c. **Updation of Area Frame and Maps**: Delimitation of areas and updation of maps to be completed well before census and based on GPS and GIS software.

   d. **Involvement of Stakeholders**: Solicit the support of key stakeholders, general public, parliamentarians amongst others.

e. **Security arrangement for field operations:** Census to be conducted by independent civil body. Based on security needs a **hybrid area-specific three-tier security arrangement** to be adopted.

f. **Enumeration Methodology:** De-jure Method of enumeration be used. This method is widely used internationally and also in all Censuses conducted in Pakistan since 1961.

g. **Questionnaire: Single Census questionnaire be administered** which should be strictly in **relevance** to the **Objectives** of Census.

h. **Pilot Census:** To help identify ambiguity to test the methodology.

i. **Communication, Advocacy and Publicity:** Done through implementation of a comprehensive communication strategy, including effective use of social media, for clarity regarding the **primary objective of Census** which may begin early and extend right up to the release of the first initial results.

j. **Field operation methodology:** Lead to be taken by Provincial government staff with adequate female enumerators. Graduate students also to be engaged.

k. **Training:** Comprehensive training of field enumeration staff including training on technology use.

l. **Mode of Data Collection:** Multi-mode data collection with emphasis on digital census. (Self-enumeration, Tablet based and etc)

m. **Monitoring and Supervision of field work:** Well trained and equipped filed staff, dashboards for real time supervisions, complaint centers at District level and etc.

n. **Post Enumeration Survey:** To increase credibility of the Census results and build confidence of stakeholders.

o. **National Census Coordination Center (N3C),** with representation of Provincial Governments, be established for operational matters and effective coordination and monitoring.

4. The Committee presented its recommendations to the Minister PD&SI in a meeting held on 15th July 2021. During the meeting the Minister noted differences in opinion of some Committee members regarding conducting digital census, using De-jure or De-facto method of enumeration and the engagement of Armed Forces. He, therefore, advised that these issues be flagged for further deliberation in the Federal Cabinet before final recommendation is made to the Council of Common Interests.

5. Subsequently, on 2nd August 2021 a meeting was held on "**Optimum use of Technology in upcoming 7th National Census**" chaired by the Minister PD&SI and also attended by the Minister for Information Technology & Telecommunication (IT&T) and Chairman NADRA, these recommendations were endorsed (**Annex-V**). To apprise the Chief Secretaries of provinces, a meeting was held 13th August 2021 under the chairmanship of Secretary PD&SI with provincial/regional Chief Secretaries for further consultations on the Committee's recommendations (**Annex-VI**). In addition, PBS technical team has visited/briefed relevant officers/officials of all provinces on detailed recommendations and technical aspects.
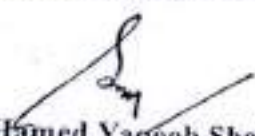
6. The census process will tentatively be completed **in 18 months/ 540 days**. A comprehensive work plan of 7th Population & Housing Census-Digital Census with timelines has been prepared (**Annex-VII**). Results of the 7th Population & Housing Census would be handed over to the **Election Commission of Pakistan** for delimitation for upcoming General Elections 2023.

7. In view of the foregoing, the recommendations of the Census Advisory Committee, were placed for consideration of Cabinet in its meeting held on 21st September, 2021. The cabinet decided that: "the matter shall be discussed, in detail, in a smaller group with representation from the allied political parties" (**Annex-VIII**). Accordingly, a consultative meeting was held on 24th September, 2021 under the chairmanship of Prime Minister with relevant stakeholders and the key recommendations were deliberated thoroughly. The PM directed minister PD&SI to firm the recommendations, in consultation with Ministers. Consequently, a meeting was held under the chairmanship of Minister for PD&SI on 30th September, 2021. The meeting was attended by Minister Information Technology & Telecommunication and Minister of Maritime Affairs. The participants agreed that:

(i). De-jure method of enumeration may be adopted for 7th Population and Housing Census. PBS would, in consultation with MoIT, NADRA and IT experts, institute safeguards to forestall misreporting. The enumerators would be well trained to elicit the response on usual place of residence.

(ii). Armed forces would be engaged to accompany the enumerators for security purposes only. The conduct of census would be done exclusively by the enumerators.

8. Approval of the Cabinet is solicited to place the recommendations of the Census Committee along with proposals given in Para-7-ante, before the CCI for approval.

9. Minister for Planning, Development and Special Initiatives has seen and authorized submission of the summary.

Hamed Yaqoob Sheikh
Additional Secretary (In charge)

Islamabad, 1st October, 2021

Annex-19

MOST IMMEDIATE

GENERAL HEADQUARTERS
GENERAL STAFF BRANCH
(MILITARY OPERATIONS DIRECTORATE)

Subject: **Legal Mandate for Employment of Armed Forces - 7th Population and Housing Census 2022**

Council of Common Interest letter number 2(12)/2021-CCI (49th) dated 1 Mar 2022 (pasted below) Reference.

1. It is intimated that, in line with **Council of Common Interest (CCI) decision**, **Pakistan Bureau of Statistics (PBS)** had engaged **Pakistan Army** for provision of security to the upcoming Census process. In this regard, after necessary internal consultations, fol security model will be adopted for smooth and secure conduct of Census-22 -

    a. Pakistan Army will synchronize/ coordinate overall security arrangements with Pakistan Bureau of Statistics and Ministry of Interior by establishing Army Census Security Center (ACSC) at the Federal, Provincial and District levels.

    b. 1st tier security (accompanying of enumerators by Police/ Frontier Constabulary/ Levies) will be provided by respective **Provincial Home Departments.**

    c. Civil Armed Forces and Pakistan Army will work as 2nd tier and 3rd tier responders respectively in **Quick Reaction Force (QRF)** mode to facilitate creation of a secure enabling environment for the Census process.

    d. Approximately **7500 x Army/ Civil Armed Forces troops will be employed during Pilot stage** while **85,000 x Army/ Civil Armed Forces troops will remain deployed during Main stage**.

    e. Data security will remain sole responsibility of NADRA and PBS.

2. Above in view, you are requested for fol:-

    a. Processing of necessary Governmental approvals with respect to requisition of Armed Forces/ Civil Armed Forces in line with above
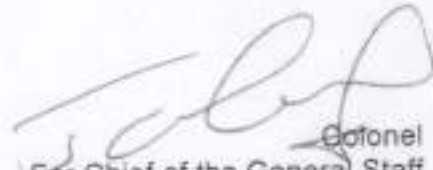
mentioned **security model** under relevant provisions of Article 245/ ATA-1997 to afford required legal cover for deployment of troops.

b. Provincial Home Departments be approached to render maximum assistance to Pakistan Army in finalizing/ integrating other Law Enforcement Agencies security plans.

c. **Financial approval and timely budgetary allocations of Rs 4.755 Bn to cover** employment of Pakistan Army during Census-22 prior to commencement of Pilot Census.

3. Forwarded for necessary action, please.

Colonel
For Chief of the General Staff
(Muhammad Jahanzeb Iftikhar)
Telephone: 051-5686213

Chief Statistician
Pakistan Bureau of Statistics, Islamabad

Case No. 4036/54/Census/MO-3 (Addl)-FPPMSVA dated 5 July 2022

Copy to: Chief of General Staff Secretariat

Headquarters Army Air Defence Command

Office Copy

Docu ID: FPPMSVA APPROVED By DD (Addl) MO Col Muhammad Jahanzeb Iftikhar on 06 Jul 2022
Note: Computer Generated Documents Do Not Require Signature.

RESTD

Government of Pakistan
Ministry of Interior

F.No.1/6/2015-CAF (C)

Islamabad, the 19th July, 2022

ORDER

S.R.O (1)/2022:- Pursuant to the request of Ministry of Planning, Development & Special Initiatives (Planning Commission) vide their O.M.No.14(14)/PBS/PD&SI/2022 dated 7th July, 2022, Office of the Chief Commissioner, ICT letter No.2-1/Home/2022 dated 15th July, 2022 and as consented by MO Dte, GHQ vide their letter No.4036/54/Census/MO-3(Addl)-FPPMSVA dated 5th July, 2022, the Federal Government, in exercise of the powers conferred under Article 245 of the Constitution, under Section 4 (3)(ii) of the Anti-Terrorism Act, 1997 is pleased to authorize deployment of Army troops / assets and Civil Armed Forces troops / assets under Section 4 (3)(i) of the Anti-Terrorism Act, 1997 for protection/security duties as 2nd & 3rd tier responder (QRF mode only) in synchronize with Provincial Law Enforcement Agencies (LEAs) to avoid any untoward incident during 7th Population and Housing Census, 2022 schedule across Pakistan in aid of civil powers subject to laws enforced in Pakistan. Dedicated security of Provincial LEAs will be employed with enumerators.

2. The exact date, area of deployment and number of Pakistan Army / CAFs troops / assets will be worked out by the Home Departments, Punjab, Sindh, KP, Balochistan, Government of GB, AJ&K, ICT Administration and Ministry of Planning, Development & Special Initiatives (Planning Commission) in consultation with MO Directorate, GHQ / CAFs authorities.

(Shoukat Ali Khan)
Section Officer (CAF)
19/07/22

The Manager,
Printing Corporation of Pakistan,
Islamabad.

1. Secretary to the Prime Minister, P.M's Office, Islamabad.
2. Secretary, Ministry of Defence, Rawalpindi.
3. Secretary, Ministry of Planning, Development & Special Initiatives, Islamabad
4. Secretary, Home Department, Government of Punjab, Lahore
5. Secretary, Home Department, Govt of Sindh, Karachi
6. Secretary, Home Department, Govt of KP, Peshawar
7. Secretary, Home Department, Govt of Balochistan, Quetta
8. Secretary, Home Department, Govt of GB, Gilgit
9. Secretary, Home Department, Govt of AJ&K, Muzaffarabad
10. Chief Commissioner, ICT, Islamabad
11. Military Operations Directorate, GHQ Rawalpindi.
12. Inspector General, Frontier Corps, Balochistan (North/South)
13. Inspector General, Frontier Corps, KP (North/South)
13. Director General, Pakistan Rangers (Punjab/Sindh)
14. Commandant Frontier Constabulary, KP, Peshawar
15. Director General, Pakistan Coast Guards, Karachi
16. Director General, Gilgit Baltistan Scouts, Gilgit
17. Inspector General of Police Punjab, Sindh, KP, Balochistan, GB, AJ&K and ICT.
18. Deputy Secretary (Security), Ministry of Interior, Islamabad.
19. Staff Officer to Minister for Interior, Islamabad.
20. PSO to Secretary Interior, Islamabad.
21. PS to Additional Secretary (BM), Ministry of Interior, Islamabad.

Government of Pakistan
Ministry of Planning Development & Special Initiatives
Pakistan Bureau of Statistics
Islamabad
*****

NO.PBS. Census-CPMU (01)/2022   Dated 29-03-2022

Subject: -   **NOTIFICATION OF COMMITTEE CONSTITUTED FOR PILOT SURVEY FOR
7th POPULATION AND HOUSING CENSUS-2022.**

        With the approval of Chief Statistician of (PBS), a technical committee has been
constituted for **"Finalization of modalities of Pilot Census"** for 7th Population and
Housing Census (Digital Census)-2022", as follows:-

S.no	Name & Designation	Status
1.	Mr. Ayazuddin , Member (C&S)	Chairman
2.	Mr. Muhammad Sarwar Gondal (RM/SS)	Member
3.	Mr. Amjad Javed Sandhu, DG(Admin)	Member
4.	Ms. Rabia Awan , DDG, (CPMU/CP&C)	Secretary/Member
5.	Mr. Munawar Ali Ghanghro, Director, FS	Member
6.	Mr. Rizwan Bashir, Director (Sample Design)	Member
7.	Mr. Muhammad Yasir Ishfaq, Director (DP)	Member
8.	Mr. Qazi IsmatUllah, DCC (G)	Member

2   **TORs of the committee are given below:-**

1. To decide on the sample size keeping in view the objective of Pilot Census.
2. To decide on level of sample either Census District or Admin District
3. To finalize the operation modalities of the pilot census

— SD —

(Qazi Saeed-ul-Hassan)
Deputy Director (Admn)

Distribution:-

1. APS to Member (C&S), PBS, Islamabad
2. APS to Member (RM/SS), PBS, Islamabad
3. Mr. Amjad Javed Sandhu, DG(Admin) , PBS, Islamabad
4. Ms. Rabia Awan , DDG, (CPMU/CP&C) , PBS, Islamabad
5. Mr. Munawar Ali Ghanghro, Director, (FS) , PBS, Islamabad
6. Mr. Rizwan Bashir, Director (Sample Design) , PBS, Islamabad
7. Mr. Muhammad Yasir Ishfaq, Director (DP) , PBS, Islamabad
8. Mr. Qazi IsmatUllah, DCC (G) , PBS, Islamabad

Copy for information:-

- SPS to Chief Statistician, PBS, Islamabad

Proposed Tablet Devices Specification

CPU:	2.0G Hz Octa core 64bit
RAM/ROM:	8GB+128GB EMCP
Display:	8-inch IPS/AFFS 1200x1920
	Industrial 1000 NIT (CD/M2) Sunlight Readable
Touch Panel:	Capacitive / frosted tempered film
	Support glove touch/spray/A-Capacitive Pen
Basic Function:	2G/3G/4G/BT/GPS/WIFI/FM/Axis
GPS:	GPS + Glonass + AGPS (Optional Beidou)
Sensors:	Motion, Gravity, Gyro, Acceleration, Opto,
	Proximity, Rotation Vector
Camera:	13 MP (AF) with flash led (Rear)
	5 MP Sub Camera (Front)
WIFI/BT:	Dual band (2.4 GHz/5Ghz) 802.11a/b/g/n MAC/BB/RF BT v4.0 (LE)
Battery:	18,600 mAh
SD Card:	up to 128GB Micro SD Card
Protection:	IP67
Rugged:	-20 to 55º C Operating Temperature
	Class 6 (IEC 60529) Waterproof
	Class 6 (IEC 60529) Dustproof
	MIL-STD 810G/Method 516.6 drop proof
	5% to 95% RH (Relative Humidity)
	Max 15,000 feet operating altitude
QR/Barcode Reading:	Integrated QR/PDF417 reader

Training of Field Staff by the Master Trainers for Pilot Census

Province	Venue	Districts	No of Blocks	Field Staff	PBS Staff	Total Strength
AJK	Mirpur	Mirpur	16	22	2	24
	Jhelum Valley	Jhelum Valley	8	13	2	15
Balochistan	Kalat	Kalat	10	14	1	15
		Mastung	8	13	2	15
	Khuzdar	Khuzdar	14	21	1	22
		Washuk	4	7	1	8
	Gawadar	Gwadar	12	19	3	22
GB	Gilgit	Baltistan	4	6	1	7
		Gilgit	8	11	1	12
		Nagar	6	9	2	11
Islamabad	Islamabad	Islamabad	20	29	4	33
Khyber Pakhtunkhwa	D.I.Khan	D.I.Khan	16	20	3	23
	D.I.Khan-II	D.I.Khan	8	14	4	18
	Abbotabad	Abbottabad	4	6	2	8
		Mansehra	4	6	2	8
		Lower Kohistan	8	14	3	17
	Kohistan	Uper Kohistan	12	22	5	27
		Kolai Pales	8	13	1	14
	R/o Peshawar	Kohat	4	6	2	8
		Nowshera	4	6	2	8
Punjab	Bahawalnagar	Bahawalnagar	16	25	4	29
	Rahim Yar Khan-I	Rahim Yar Khan	20	29	4	33
	Rahim Yar Khan-II	Rahim Yar Khan	16	21	2	23
	Jhang	Jhang	16	24	5	29
	Multan	Multan	20	29	4	33
	Jhelum	Jhelum	14	21	4	25
	Rawalpindi	Rawalpindi	24	34	5	39
	Khushab	Khushab	12	24	4	28
Sindh	Dadu	Dadu	12	18	4	22
	Jamshoro	Jamshoro	18	27	4	31
	Karachi Central	Karachi Central	16	27	6	33
	Karachi East	Karachi East	21	32	5	37
	Tharparkar	Tharparkar	14	23	5	28
	Sanghar	Sanghar	16	25	5	30
	Sukkur	Sukkur	4	6	2	8

Annex-A

PROFORMA FOR MECHANISM OF POSTING OF ADDITIONAL ENUMERATORS IN CASE OF BIG BLOCKS FOUND DURING PILOT CENSUS

PROVINCE _____ DISTRICT _____ TEHSIL _____

CHARGE _____ CIRCLE _____ NAME OF MAUZA/URBAN AREA _____

NAME & DESIGNATION OF ENUMERATOR _____

COMPLETE BLOCK CODE (9 DIGIT) _____ TOTAL NUMBER OF HOUSES _____

SL. NO.	NAME(S) & DESIGNATION OF ADDITIONAL ENUMERATORS	ASSIGNED HOUSES	REMARKS
1			
2			
3			
4			
5			

_____
VERIFIED BY CENSUS DISTRICT OFFICER

7TH POPULATION AND HOUSING CENSUS 2022 (DIGITAL CENSUS)

FIELD QUALITY CONTROL SHEET

PILOT CENSUS

Name of the Province..............................

Name of Census District............................

Census District Code...............................

S.NO	DATE	ISSUE OBSERVED DURING THE FILED OPERATION	STEPS TAKEN FOR SETTLEMENT	TIME TAKEN FOR SETTLEMENT	STATUS OF ISSUE RESOLVED (Yes/No)	REMARKS

Government of Pakistan
Ministry of Planning Development and Special Initiative
Pakistan Bureau of Statistics
Statistics House, 21- Mauve Area, G-9/1, Islamabad

.....

FEED BACK FORM
ENUMERATION APPLICATION

Tehsil _____ District: _____ Training Station: _____

1. Performance Evaluation of Main Modules / Feature

Sr	Module / Feature	Satisfied	Rare Issues	Frequent Issues	Problematic	Remarks
1	Login	☐	☐	☐	☐	
2	Import Block Listing	☐	☐	☐	☐	
3	Map / Location	☐	☐	☐	☐	
4	Population Section	☐	☐	☐	☐	
5	Housing Section	☐	☐	☐	☐	
6	Start & Finish Household	☐	☐	☐	☐	
7	Edit / Logical Validation Checks	☐	☐	☐	☐	
8	Sync / Upload	☐	☐	☐	☐	

2. Problems or Issues Faced

Sr	Problem Description	Contact Person	Response Time	Solution	Remarks
1					
2					
3					
4					
5					

* Attach additional sheet for more

Signature _____

Name: _____

Mobile _____

Block Code _____

DP Center, Support Service Wing, PBS, Islamabad

Government of Pakistan
Ministry of Planning Development and Special Initiative
Pakistan Bureau of Statistics
Statistics House, 21- Mauve Area, G-9/1, Islamabad

......

FEED BACK FORM
HOUSE LISTING APPLICATION

Tehsil _____ District: _____ Training Station: _____

1. Performance Evaluation of Main Modules / Feature

Sr	Module / Feature	Satisfied	Rare Issues	Frequent Issues	Problematic	Remarks
1	Login	☐	☐	☐	☐	
2	Import Block	☐	☐	☐	☐	
3	Map / Boundary	☐	☐	☐	☐	
4	Location / GPS	☐	☐	☐	☐	
5	Listing Data Entry	☐	☐	☐	☐	
6	Edit / Logical Validation Checks	☐	☐	☐	☐	
7	Sync / Upload	☐	☐	☐	☐	

2. Problems or Issues Faced

Sr	Problem Description	Contacted Person	Response Time	Solution	Remarks
1					
2					
3					
4					
5					

* Attach additional sheet for more

Signature _____

Name: _____

Mobile _____

Block Code _____

DP Center, Support Service Wing, PBS, Islamabad

Government of Pakistan
Ministry of Planning Development and Special Initiative
Pakistan Bureau of Statistics
Statistics House, 21- Mauve Area, G-9/1, Islamabad

_____ the,___ July, 2020

PILOT FOR FIRST EVER "DIGITAL CENSUS", 2022

District:_____ Tehsil :_____ IT Trainer Name:_____

Kindly Evaluate the quality of training as this is pilot Census and we have to improve the quality for First Ever "Digital Census". Please don't be biased as your opinion will be the feedback for evaluation and improvement of the training. Please check the appropriate box

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The training met my expectations	☐	☐	☐	☐	☐
I will be able to deliver it further or apply in the Field	☐	☐	☐	☐	☐
The content was easy and properly managed to follow	☐	☐	☐	☐	☐
The trainer was Knowledgeable	☐	☐	☐	☐	☐
Trainee participation was encouraged	☐	☐	☐	☐	☐
Application interaction was properly demonstrated	☐	☐	☐	☐	☐
Application design was easy to understand	☐	☐	☐	☐	☐
Adequate time was provided to discussion and question session	☐	☐	☐	☐	☐
Overall rating of the training	☐	☐	☐	☐	☐

What aspect of the training can be improve?

_____
_____
_____

Any other Feedback/Suggestion about Pilot Census Software Training:

_____
_____
_____

Signature: _____

Name: _____

Designation: _____

DP Centre, Support Services Wing, PBS

QUESTIONNAIRE RELATED FEEDBACK FORM

Filled by =   1. Master Trainer/ Trainer   2. Charge/Circle Supervisor   3. Field Enumerator

S.no	Section /Questions	Issues in Questions/statement/wording /Skip pattern	Proposal/Suggestions
1	1. گھر کے سربراہ یا اس کی اجازت سے گھر کے کسی بالغ فرد سے رابطہ کریں۔ مردم شماری کے فارم کو پُر کرنے کے لیے معلومات حاصل کریں۔ گھر کے تمام افراد کے بارے میں معلومات درج کریں۔		
2	کوڈ - Q2 گھر کے سربراہ کا نام لکھیں		
3	Q3 - جنس		
4	Q4 - نام کے ساتھ رشتہ عمر کیا ہے؟ (سال میں)		
5	Q5 - نام کی ازدواجی حیثیت کیا ہے؟		
6	Q6 - نام کا مذہب کیا ہے؟		
7	Q7 - نام کی مادری زبان کیا ہے؟		
8	Q8 - نام کی قومیت کیا ہے؟		
9	Q9 - نام کیا آپ پڑھ لکھ سکتے ہیں؟ (کسی بھی زبان میں پڑھنے اور لکھنے کی صلاحیت)		

S.no	Section /Questions	Issues in Questions/statement/wording /Skip pattern	Proposal/Suggestions
10	Q10 - پہر کیا گھر کے افراد کی تعداد پر مشتمل ہے . مہربانی کر کے مکمل فہرست فراہم کریں؟		
11	Q11 نام کیا ہمیشہ سے اسی جگہ پر رہے ہیں؟ (مہربانی کر کے Q102 میں جائیں، اگر نہیں تو)		
12	Q12 نام کی سابقہ تعداد کیا ہے؟		
13	Q13 محکمہ 12 مہینوں کے دوران کیا حاصل ہوا؟ مطلب کسی گھر کا ہے؟		
14	Q14- اس ادارہ کی خدمت کے گھر کے دوران کیا نام کر گئے مسلسل کام کرتے (انڈیکیٹر، جلدی، ریکارڈ، کالوکیشن، سہولت اور سروسز (Q 13 سے 1 تا 6 تک کے)		
15	Q15 نام کا سلسلہ کا (سلسلہ) اعدادی کر رہے ہیں؟ سلسلہ (نام)		
16	Q16 نام موجودہ گھر میں مسلسل کتنے عرصے سے ہے؟ رہائش، نام کے		
17	Q17 نام کا سلسلہ، رہائش ہلا گھر سے لگتا کیا ہے؟ روزے کے		
18	Q18 نام کا سلسلہ ہے، اس دوران جاب کیا ہے نتیجہ، لگائے (بلا) کال کیسے، 235/اکثر میں کیش مشتمل / اکثر / بلدیہ		
19	Q19 نام کے سلسلہ یا کہ جو سلسلہ تک رہائش پذیر یا نام کے (بلا یا مہینہ سال کیش پذیر نظام کے سلسلہ کا		
20	Housing Related Questions		

Use additional Sheet If required

Census Pilot Field Monitoring Report

Personal Information:-

Name of Monitoring Person: _____   Office: - _____

Designation: _____   Phone Number: _____

Block Information:-

Block Code:- _____   Admin District: - _____

Census District: _____

Pilot Field Operation Visit

Pilot Field Operation activities should be filled by the Monitoring Officer on each day of Visit:

1. Total Blocks : _____
   Total Households: _____

2. Feedback regarding below mentioned activities:

S.No	Activity	Personal Remarks	Enumerator Remarks
	Pilot Field Operation Visit		
1	Issues		
2	Publicity		
3	Listing (Sequence of number of Structure)		
4	Software		
5	Hardware		
6	Coordination		
	a.Role of NADRA		
	b.Role of PBs Representative		

3. Suggestions/Remarks/Recommendations: _____

_____

_____

_____
Name & Signature
(Monitor)

+Government of Pakistan
Ministry of Planning, Development & Special Initiatives
Pakistan Bureau of Statistics
Islamabad

SOPs for Monitoring of Pilot Field Operation for conduct of 7th Population and Housing Census-2022 "The Digital Census"

Following are the SOPs for Monitoring of Pilot Field Operation for conduct of 7th Population and Housing Census-2022 "The Digital Census "

1. Field Monitoring Days must be 2 or 3 days for one field monitoring officer in one Census District or Admin District.

2. Selected Monitoring Officer must visit 2 blocks in a day in a selected tehsil and cover 3 household per block where enumeration is in progress.(Enter data of one household manually with enumerator and enter data of remaining two household where enumerator already done enumeration). Manual data collection will be used for data verification.

3. Monitoring Officer will submit report in soft and hard form on the very next day of his/her arrival at Head Quarter, CPMU Section

4. Monitoring Officer must observe and report the sequence of "manual number on Structures" from two different block points/locations.

5. A comprehensive Report on prescribed format along with filled in questionnaires is required by the monitoring officer.

6. Monitoring Officer reports the timing required for a question for manual data collection on the basis of his/her data collection experience.

7. Concerned Regional/ Field Office and Deputed Field Staff is responsible to facilitate the monitoring officer to locate the desired blocks and other necessary arrangement in this regard.

8. Monitoring Officer must enter structure number on their manual form

Government of Pakistan
Ministry of Planning Development and Special Initiative
Pakistan Bureau of Statistics
Statistics House, 21- Mauve Area, G-9/1, Islamabad

_____ the,___ July, 2020

PILOT FOR FIRST EVER "DIGITAL CENSUS", 2022

District:_____ Tehsil :_____ IT Trainer Name:_____

Kindly Evaluate the quality of training as this is pilot Census and we have to improve the quality for First Ever "Digital Census". Please don't be biased as your opinion will be the feedback for evaluation and improvement of the training. Please check the appropriate box

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The training met my expectations	☐	☐	☐	☐	☐
I will be able to deliver it further or apply in the Field	☐	☐	☐	☐	☐
The content was easy and properly managed to follow	☐	☐	☐	☐	☐
The trainer was Knowledgeable	☐	☐	☐	☐	☐
Trainee participation was encouraged	☐	☐	☐	☐	☐
Application interaction was properly demonstrated	☐	☐	☐	☐	☐
Application design was easy to understand	☐	☐	☐	☐	☐
Adequate time was provided to discussion and question session	☐	☐	☐	☐	☐
Overall rating of the training	☐	☐	☐	☐	☐

What aspect of the training can be improve?

_____
_____
_____

Any other Feedback/Suggestion about Pilot Census Software Training:

_____
_____
_____

Signature: _____
Name: _____
Designation: _____

DP Centre,Support Services Wing,PBS

Government of Pakistan
Ministry of PD&SI
Pakistan Bureau of Statistics
Islamabad

NO.PBS. CPMU/Pilot Survey/2021-2022-

Dated: 13-07-2022

Subject: - CONSTITUTED OF COMMITTEE AND DECLARATION OF TRAINING MONITORING ROOM FOR PILOT CENSUS

It is informed that following Committee is constituted for monitoring the training of pilot Census survey and will be responsible to submit reports daily basis regarding the issues reported by the master trainers on the daily basis from day-1 to day-5 (13-07-2022 to 17-07-2022). This committee is also responsible to collate the feedback and prepare a report on the problems faces during the training process, so that a mechanism will be made to overcome the problems for quality assurance of the Gigantic National Task.

1. Mr. Yasir Ishfaq, Director DP, PBS Islamabad
2. Mr. Arshad, CSO, CP&C, PBS Islamabad
3. Mr. Muhammad Mazahir SO, FS, PBS Islamabad
4. Mr. Zameer Ahmad, System Analyst, CPMU, PBS Islamabad
5. Mr. Muhammad Ishfaq Malik, Statistical assistant, PSLM, PBS, Islamabad
6. Mr. Muhammad Ali, Statistical assistant, PSLM, PBS, Islamabad

2. Further IT committee room situated at First Floor DP Center is declared as **Pilot Census Training Monitoring & Quality Assurance Room**, where the above committee members will be monitored through zoom connected with 27 training venues and note down the problems faces by them.

(Rabia Awan)
Deputy Director General(CPC/CPMU

Distribution:

1. Mr. Yasir Ishfaq, Director DP, PBS Islamabad
2. Mr. Arshad, CSO, CP&C, PBS Islamabad
3. Mr. Muhammad Mazahir SO, FS, PBS Islamabad
4. Mr. Zameer Ahmad, System Analyst, CPMU, PBS Islamabad
5. Mr. Muhammad Ishfaq Malik, Statistical assistant, PSLM, PBS, Islamabad
6. Mr. Muhammad Ali, Statistical assistant, PSLM, PBS, Islamabad

Copy to information:

- SPS to Chief Statistician, PBS. Islamabad
- APS to Member (C&S), PBS. Islamabad
- APS to Member (SS/RM), PBS Islamabad
- Mr. Muhammad Ehtesham Director DP, PBS Islamabad with the request to create the zoom link and connect the 27 training venue.

DAILY PROGRESS REPORT

Training Day _____

Name of Training Venue: _____

District: _____

Date: _____

Following Question should be filled by the Master Trainer on each day of Training:

1. Total Participant of Training: _____
   Participant Attend training: _____
   Participant absent in training: _____
2. Did all the training related material provided to all
   participant: _____
3. Feedback regarding below mentioned facilities:

Facilities	Very satisfied	Satisfied	neutral	Dissatisfied	Reason Why Dissatisfied
Multimedia					
Generator					
Electricity					
Sitting Arrangements					

4. Section/ portion covered today
   Conceptual: _____
5. Name of section covered
   Tablet/practical: _____
6. Did you achieved today's targeted progress:

   _____

7. What was the participant behavior toward training:

Very Satisfied	Satisfied	Neutral	Dissatisfied

8. Did participant of training face any problem on handling Tablet:

   _____

9. Did participant arise any queries regarding training and they have replied satisfactory :

   _____

10. Any other Remarks: _____

   _____

Name & Signature
(Master Trainer)

Summary of Issues Faced During Pilot Census

No	Issues Faced	Count	Stations
1	App Crash / System UI has Stopped	10/27	Upper Kohistan Abbottabad, Mirpur, Karachi East, Rahim Yar Khan-II, Islamabad, Jhelum, Hattian Bala, Khushab, Gilgit Baltistan
2	Block Boundary Issues	11/27	Upper Kohistan Abbottabad , D.I.Khan Venue-I, Mirpur*, Karachi Central, Dadu, Hattian Bala, Sanghar, Peshawar, Jhang, Gilgit Baltistan, Rawalpindi, Tharparkar, Islamabad, Sukkur, Multan, Dera Ismail Khan
3	Imagery and GEO coding issues	27/27	Abbottabad , Mirpur Azad , Jhelum, Karachi Central, Multan , Khushab, Gilgit Baltistan, Hattian Bala, Kashmir, Bahawalnagar, Sanghar, Jamshoro, Dadu, Peshawar, D.I.Khan Venue-I, Jhang, Dera Ismail Khan, Rahim Yar Khan-Ii, Rawalpindi, Tharparkar, Islamabad, Karachi East, Gwadar, Sukkur
4	Physical Maps block boundary and Tablet's block boundary doesn't match	3/27	Abbottabad , Bahawalnagar, Khushab
5	Post-Sync Edit/Delete wasn't allowed	14/27	Abbottabad , Mirpur, Bahawalnagar, Multan, Hattian Bala , Khushab Jamshoro, Dadu, Peshawar, Jhang, Karachi Central, Gwadar, Sukkur, D.I.Khan Venue-I
7	Auto-Sync Issue	1/27	Abbottabad
8	Data Upload/Sync Problems	12/27	Abbottabad , Mirpur, Karachi East, Dadu, Jhelum, Karachi Central, Jhang, Rahim Yar Khan-Ii, Rawalpindi, Upper Kohistan, Gwadar, Islamabad
9	Data Loss problem	5/27	Abbottabad , Mirpur, Bahawalnagar, Dadu, Rawalpindi
10	Invalid Validation checks.	27/27	Abbottabad , Mirpur, Bahawalnagar, Dadu, Khushab, Multan, Peshawar
11	Second and third wives could not be added	27/27	Abbottabad , Mirpur, Dadu, Peshawar, Jhang, Khushab, Multan, Dera Ismail Khan, D.I.Khan Venue-I, Gilgit Baltistan
13	Tablet Heat-up and Restart	12/27	Karachi, Abbottabad , Mirpur, Bahawalnagar, Karachi East, Dadu, Khushab, Jhang, Rawalpindi, Tharparkar, Karachi East Islamabad
14	battery drainage issues	19/27	Abbottabad , Khushab, Mirpur, Jhelum, Hattian Bala, Karachi Central, Bahawalnagar, Upper Kohistan, Jamshoro, Gilgit Baltistan, Karachi East, Peshawar, Jhang, D.I.Khan Venue-I, Rahim Yar Khan-Ii, Rawalpindi, Tharparkar, Multan, Gwadar
15	Very small / very large blocks	6/27	Abbottabad , Jhelum, Mirpur, Bahawalnagar, Khushab, Karachi East
16	Questionnaire concepts not clear	1/27	Abbottabad
17	Tablets were handed over to Enumerators on Day 3 of Training Session	1/27	Abbottabad ,

No	Issues Faced	Count	Stations
18	Tablet charging / Battery Backup Issues	14/27	Karachi, Multan, Upper Kohistan, Abbottabad , Bahawalnagar, Dadu, D.I.Khan Venue-I, Peshawar, Tharparkar, Islamabad, Sukkur, Jhelum, Sanghar, Dera Ismail Khan
19	Load Shedding issues / Generators not arranged	8/27	Karachi, Abbottabad , Bahawalnagar, Multan, Khushab, D.I.Khan Venue-I, Dera Ismail Khan
20	Manual Handling of all evaluation proformas / record keeping/ tests conducting	2/27	Abbottabad , Hattian Bala
23	IMEI numbers issue	1/27	Multan
26	Login Logout Issues	7/27	Karachi, Jamshoro, Dadu, Karachi Central, Gilgit Baltistan, Khushab, Karachi East
27	Tablet Carrying Weight	2/27	Karachi, Bahawalnagar
28	No Protective Cover for Tablet	1/27	Karachi
29	Transportation Issues	1/27	Karachi
30	Coordination among PBS and District Administrative Authorities	2/27	Karachi, Multan
31	No Power banks provided	8/27	Karachi, Bahawalnagar, Jhelum, Karachi Central, Jamshoro, Rahim Yar Khan-Ii, Khushab , Gwadar
33	Time and Date binding	1/27	Upper Kohistan
34	Forget/change Password Issue	9/27	Upper Kohistan, Jamshoro, Jhang, Karachi Central, Gwadar, Islamabad, Sukkur, Dera Ismail Khan, Gilgit Baltistan
35	No Notification of updation / delayed app updates	3/27	Upper Kohistan Dadu, Sanghar
36	Update population information	1/27	Upper Kohistan
37	Household members data issue	4/27	Upper Kohistan Dadu, D.I.Khan Venue-I, Khushab
42	No notification regarding the import of listing data	1/27	Upper Kohistan
43	No data restore option	1/27	Upper Kohistan
44	Code for Mosque in Q3 is Missing	1/27	Upper Kohistan
45	Incomplete Country list in Migration section	1/27	Upper Kohistan
46	Some PSIC codes are missing	3/27	Upper Kohistan Bahawalnagar, Dera Ismail Khan
47	SIM / network issues	15/27	Upper Kohistan Karachi, Mirpur, Bahawalnagar, Khushab, Dadu, Hattian Bala, Peshawar, Jhang, Gilgit Baltistan, Rahim Yar Khan-II, Rawalpindi, Tharparkar, Karachi Central, Gwadar
49	Slow charging Problem	6/27	Mirpur, Bahawalnagar, Multan, Jhelum, Jamshoro, Dadu
50	Multimedia was not working correctly	2/27	Upper Kohistan, Dera Ismail Khan
51	Training period was short for practical session	4/27	Bahawalnagar, Karachi East, Upper Kohistan, Karachi Central
52	NADRA representatives were not fully	27/27	Bahawalnagar, Hattian Bala, Karachi East, Peshawar,

No	Issues Faced	Count	Stations
	trained to resolve the issues		Rahim Yar Khan-II, Rawalpindi, Upper Kohistan, Rahim Yar Khan I, Multan, D.I.Khan Venue-I, Jhelum
53	Charging/ accessories missing / not working	4/27	Mirpur, Multan, Khushab, Karachi East
54	Enumerator replacement and updation are problematic	1/27	Multan
55	Unavailability of HR, monitoring, task and block assignment dashboard	6/27	Dadu, Peshawar, Jhelum, Khushab, Multan, Hattian Bala
56	Data Security and privacy	1/27	Multan
57	"distance from Block" issue in House Listing Application	2/27	Jhelum, Khushab
58	Alerts Messages were too generic	3/27	Jhelum, Dera Ismail Khan, Karachi East
59	Resource Hungary application	1/27	Jhelum
60	Number of Completed Households were less than Synced Households	1/27	Jhelum,
61	No mechanism for user to enter remarks	2/27	Jhelum, Sanghar
62	Question of Economic Census consumed much time	1/27	Jhelum,
64	No Video tutorials, no user-guide was available	2/27	Jhelum, Hattian Bala
65	Skip patterns not implemented in application	4/27	Tharparkar, Jhelum, Karachi Central, Gwadar
66	Training Venue issues	5/27	Bahawalnagar, Jhang, Rahim Yar Khan-Ii, Jhelum, Karachi East
67	Help line issues	1/27	Bahawalnagar
68	Weather Issues. Provision of umbrellas/ jackets	5/27	Karachi, Bahawalnagar, Gwadar, Jhelum, D.I.Khan Venue-I
69	Restore database option must have some kind of approval from supervisor.	1/27	Jamshoro
70	Application response time issue	1/27	Karachi East
71	Online Entry of Daily Progress was not available	1/27	Dadu
72	Installation/Updation of apps via MDM had issues	3/27	Peshawar, Gilgit Baltistan, Karachi East
73	There was no proper way of adding "Bay Ghar Afraad".	1/27	Jhang
74	Data Inconsistency	2/27	Rawalpindi, Sukkur
75	Online complaint management system is required	3/27	Gawadar, Sukkur, Hattian Bala
76	Exception reporting / Error Reporting mechanism was missing in both the applications.	1/27	Rahim Yar Khan I
77	Lack of documentation (User	27/27	All Stations

No	Issues Faced	Count	Stations
	Manual/User Guide of apps)		
78	Provision of Three Tier Support System	1/27	Rahim Yar Khan I
79	Implementation for Enumerator Coaching	1/27	Rahim Yar Khan I
80	Poor quality of app. Inconsistent User interface	2/27	Dera Ismail Khan, Hattian Bala
81	No user feedback	2/27	Dera Ismail Khan, Hattian Bala
82	Poor Navigation	1/27	Dera Ismail Khan
83	The backup option does not work properly	1/27	Dera Ismail Khan
84	No option to deselect the accidentally clicked option	1/27	Dera Ismail Khan
85	not possible to make user ID of the reserve enumerator	1/27	Dera Ismail Khan
86	Shortage of Tablets	2/27	Dera Ismail Khan, Khushab
87	In rural areas the area option is not updating the status	1/27	Dera Ismail Khan
88	More than two units in the same building are not accepted by the application.	1/27	Dera Ismail Khan
89	The option for OTAQ/DERA is not accepted by the app in case of the DERA inside the house.	1/27	Dera Ismail Khan
90	Checks are not applied on marital status of children less than 13. Checks are not applied on children less than 5 years	2/27	Dera Ismail Khan, Khushab
91	In employment status the category for daily wages labor is missing.	1/27	Dera Ismail Khan
92	The Area option was not functioning well, if the rural area is selected, it always turns back to urban on edit	3/27	D.I.Khan Venue-I, Gilgit Baltistan, Khushab
93	Very complex design of listing application as multiple links to enter information.	1/27	Gilgit Baltistan
94	Data Import Issue	1/27	Hattian Bala
95	Tablet Screen damages	1/27	Hattian Bala
96	Immature Software	1/27	Khushab
97	Abnormal Block Size	1/27	Khushab
98	Tablets were received on third day of training, it took time to check and manage tablets	1/27	Karachi East

Pilot Census Working Groups

The following nine working groups were created each with a different census related responsibility for preparation of a comprehensive evaluation report on Pilot Census of 7th Population and Housing Census-2022.

Group – I	Hardware (Data Infrastructure and Call Center)	
Mr. Yasir Ishfaq	Director	Team Leader
Mr. Muhammad Ehtesham	Director	Team Member
Mr. Mudassar Akhtar	Chief System Analyst	Team Member
Mr. Zameer Ahmad	System Analyst	Team Member
Mr. Ali Raza	System Analyst	Team Member

Group – II	Census Software and Allied Matters	
Ms. Sobia Munawar	Director	Team Leader
Mr. Yasir Ishfaq	Director	Team Member
Mr. Saqib Sultan Khawar	Statistical Officer	Team Member
Mr. Arslan Bashir	Data Processing Officer	Team Member
Ms. Mehreen	Data Processing Assistant	Team Member

Group – III	Field Services	
Mr. Rafiq Hussain Talpur	Director	Team Leader
Ms. Kanwal Murtaza	Chief Statistical Officer	Team Member
Mr. Sayyad	Chief Statistical Officer	Team Member
Mr. Javed Khan	Assistant Census Commissioner	Team Member
Mr. Muhammad Muzahir	Statistical Officer	Team Member

Group – IV	Overall issues Regarding Pilot Census	
Mr. Yasir Ishfaq	Director	Team Leader
Mr. Rafique Hussain Talpur	Director	Team Member
Ms. Kanwal Murtaza	Chief Statistical Officer	Team Member
Ms. Ayesha Sajid	Instructor	Team Member
Mr. Saeed Ahmed	Assistant Census Commissioner	Team Member
Mr. Saqib Sultan Khawar	Statistical Officer	Team Member
Ms. Sana Habib	Statistical Officer	Team Member

Group – V	Matter Regarding Census Background Process and other Allied Matters	
Ms. Rabia Awan	Deputy Director General	Team Leader
Ms. Hina Kanwal	Statistical Officer	Team Member
Ms. Sana Habib	Statistical Officer	Team Member
Mr. Zubair Ahmad	Data Processing Officer	Team Member
Syed Farhan Ali	Data Processing Officer	Team Member
Ms. Rabail Azeem	Statistical Assistant	Team Member

Group – VI	Questionnaire and Manual	
Mr. Naveed Iqbal	Joint Agriculture Census Commissioner	Team Leader
Mr. Muhammad Sarfaraz	Chief Statistical Officer	Team Member
Mr. Saeed Ahmad	Assistant Census Commissioner	Team Member
Mr. Saqib Sultan Khawar	Statistical Officer	Team Member
Ms. Sana Habib	Statistical Officer	Team Member
Ms. Sadaf Toqeer	Statistical Assistant	Team Member
Mr. Muhammad Awais	Statistical Assistant	Team Member

Group – VII	GIS Maps	
Mr. Yasir Ishfaq	Director	Team Leader
Qazi Ismatullah	Deputy Census Commissioner	Team Member
Ms. Rumana Sadaf	Chief Statistical Officer	Team Member
Mr. Sabahat Nadeem	Data Processing Officer	Team Member
Khawaja Asif	Data Processing Officer	Team Member

Group – VIII	Report Writing	
Dr. Amjad Javed	Deputy Director General	Team Leader
Dr. Arshad Mahmood	Chief Statistical Officer	Team Member
Dr. Waqas Ahmad	Chief Statistical Officer	Team Member
Mr. Faridon Khan	Statistical Officer	Team Member
Ms. Ehsana Anum Syed	Statistical Officer	Team Member

Group – IX	Publicity and Social Media Campaign	
Ms. Rabia Awan	Deputy Director General	Team Leader
Ms. Ayesha Sajid	Instructor	Team Member
Qazi Saeed ul Hassan	Deputy Director	Team Member
Mr. Fakhar Abbas Hashmi	Librarian	Team Member
Mr. Umair Saeed	System Analyst	Team Member
Ms. Nubeed Sohail	Statistical Assistant	Team Member

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