AGRICULTURE LAND USE STATISTICS OF GILGIT BALTISTAN

(2020-21)

DIRECTORATE OF AGRICULTURE (DoA), GILGIT BALTISTAN, PAKISTAN

GEOSPATIAL APPLIED LAB (GAL) IN COLLABORATION WITH STATISTICAL CELL, DoA GILGIT

LIST OF FIGURES

Table of Contents

1. ABSTRACT

Awareness of the land use and land cover is an important process for many planning and management activities and is considered an essential element for modeling and understanding the earth as a system. Land cover maps are presently being developed from local to national to global scales. The use of satellite data and aerial photographs has been an accepted practice to map land use. The term land cover relates to the type of feature present on the surface of the earth. Lakes, rivers, deserts, and forests are all examples of land cover types. On the other hand, the term land use relates to the human activity or economic function associated with a specific piece of land. Remote sensing is one of the burgeoning and indispensable tools for assessment the best use of land in the natural/human ecosystems. NASA began a successful program for monitoring earth's resources from space in July 1972. All satellites in the series carried the Landsat designation. Eight generations of satellites have been launched into space since 1972. The latest one is the Landsat-8 or the Operational Land Imager (OLI) which was launched in 2013. It has 12 bands in the visible and infrared bands and has 30 m spatial resolution. Features in satellite images can be identified using visual or automated methods. The most common approach is the automated image classification, in which a computer algorithm groups pixels in the image into classes that the analyst defines. There are many studies on the land use and land cover mapping close to the study area. Most of these studies operated satellite images in order to highlight temporal changes. The main objectives of this are to highlight the spatial distribution of barren lands in Gilgit Baltistan; to determine the soil quality at such barren lands; and to rate their suitability for different land use. All barren lands will be identified and selected on the basis of different criteria using GIS and RS. This study will enable Department of Agriculture (DoA) to make policies in future. Till now projects and polices are being carried out without any reliable data available.

2. ACKNOWLEDGEMENTS

We are grateful to Allah Almighty for the good health and well-being. Foremost, we would express our heartiest and sincere gratitude to Mr Khadim Hussain Saleem, Secretary ALF, Mr. Riaz Ali Director Agriculture, Mr. Mehmood Asghar, Director Agriculture Research, Mr. Javed Akhtar Project Coordinator and Dr. Shakir Ullah Deputy Director, Statistics, Gilgit. We have been amazingly fortunate to have such great mentors who always give us the freedom to explore on our own and whenever our steps falter, they guide us sincerely. Without their support and trust on us, we would not be able to attain this milestone. Special thanks to Dr. Shakir Ullah, Deputy Director Statistics, for his utmost dedication and guidance throughout this journey.

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3. LIST OF DEFINATIONS

1. Cropland	Crop fields
	Vegetable areas
2. Built-up Lands	Residential
	Commercial and services
	Industrial
	Transportation, communication, and utilities
	Industrial and commercial complexes
	Mixed urban and built-up land
3. Plantation/ Orchards	pasture
	Orchards, vineyards, nurseries, and ornamental horticultural areas
	Confined feeding operations
4. Marginal Lands	Herbaceous rangeland
	Shrub and brush rangeland
	Mixed rangeland
	Forested wetlands
	No forested wetlands
5. Cultivable Land	Barren land below water channel
	Salty areas below water channels
	Sandy areas other than beaches below water channels

4. LIST OF ABBREVIATIONS

1	AOI	Area of Interest
2	GIS	Geographical Information System
3	RS	Remote Sensing
4	LULC	Land Use Land Cover
6	NDVI	Normalized Difference Vegetation Index
7	ANN	Artificial Neural Networks
8	OBIA	Object-Based image analysis
9	EO	Earth observation
10	SVM	Support Vector Machines
11	ESA	European Space Agency
12	RF	Random Forests

Chapter 1

1. INTRODUCTION

Gilgit Baltistan (GB) is a mountainous region with very high terrain. With all the four seasons and a variety of different crop capacities, three major cropping zones have been classified in GB based on agricultural productivity and cropping patterns. These zones include: Single, Marginal Double and Double Cropping. In double cropping zone, two mature crops are harvested. Wheat is grown as winter crop and maize as summer crop.

In double marginal cropping zone, wheat is harvested as a mature crop while maize is harvested half mature and mostly used as fodder. Farmers in marginal double cropping zone sometimes modify this pattern to wheat-buckwheat, barley-maize and barley-buckwheat. In such cases, farmers harvest two complete crops. In single cropping zone, farmers only grow wheat or barley or maize due to short growing season. The cropping zone determines the level of men and women's involvement in farming activities.

The work intensity increases in double and transitional cropping zones. In single cropping zone, people keep large and small ruminants. Bulls are used for ploughing in remote areas inaccessible by tractors and thresher machines. Due to very low annual precipitation (100-600 mm), agriculture is very dependent on irrigation water coming from melted snow and glaciers. Over the past three decades, cropping patterns have drastically changed. In the past, farmers used to grow variety of crops to ensure year round food security for the whole family.

There has been a reduction in production of barley, buckwheat, millet and pulses as improved varieties of wheat, potato, vegetables and maize have been introduced into the area by the government and development partners.

This study will enable Department of Agriculture (DoA) to make policies in future. Till now projects and polices are being carried out without any reliable data available. Last survey was conducted in the year 2014 and a book was published titled as "**Gilgit Baltistan Agriculture Statistics Survey 2014**".

Till now no progress has been made in this regard. This current report is an important step in this regard. Department of Agriculture has put a great effort in bringing ICT based technologies to the department. This project is a testimony in this regard. Department of agriculture initiated a project titled "**Strengthening of Agriculture Secretariat and E-Agricultural Extension Services in Gilgit-Baltistan**".

This statistical report will enable Department of Agriculture to carry out all activities by keeping in mind the exact land use areas and types in anywhere in Gilgit Baltistan. The distribution of resources and policies will be very easy. Most importantly, this department will be the one with the accurate information in order to bring investors and major projects in the agriculture sector from the international and national donors.

OBJECTIVES:

- Village wise Agriculture Area statistics for Gilgit Baltistan
- District Wise Agriculture Areas Statistics for Gilgit Baltistan
- Land Use Land Cover Maps for all the villages
- Total Cultivated Area in Gilgit Baltistan
- Total Cultivable Area in Gilgit Baltistan

It is noted that this study has been carried out for the land below water channel.

Chapter 2

MATERIALS AND METHODS

1. STUDY AREA

The province of Gilgit Baltistan (GB) is located between 35-37□ N and 72-75□ E in the extreme north of Pakistan and Afghanistan to the north and west, China to the north and east, and India to the south. The estimated population of GB is over one million living in 703 villages scattered all over the area. The average household comprises of 11 persons. The population density is 12 persons per sq km. It is reported that up to 96% population is directly or indirectly dependent on agriculture for its livelihood. Average annual per capita income in GB is Rs. 29,426 most of which comes from on-farm activities. GB is divided into ten administrative districts namely Gilgit, Diamer, Ghizer, Skardu, Ghanche, Astore, Hunza, Nagar, Shigar and Kharmong. It consists of three divisions, Gilgit, Diamer and Baltistan The area is mostly covered by the Himalayas, the Karakoram and the Hindu Kush mountain ranges. The Indus River flows out of these mountain ranges and their glaciers to irrigate the entire Pakistan. GB is linked to the rest of the country and to China through the KKH which extends from the Khunjrab Pass on the Chinese border down to Manshera in the KPK province.

Figure 1(Gilgit Baltistan)

2. TOOLS USED

The following tools are used from preprocessing to post processing of the data

- ARCMAP 10.5
- QGIS
- ERDAS IMAGINE
- ENVI Software
- PYTHON
- BULK DOWNLOADER
- GOOGLE EARTH PRO
- MICROSOFT EXCEL

Digitization has been carried out in Arc Map 10.5. The data has been accessed and downloaded through Python package of ArcPy and Bulk downloader. ERDAS Imagine and ENVI have been used to carry out spatial data analysis and preprocessing. Google Earth has been used to find reference high resolution imagery. Graphs and tables have been prepared in Excel.

3. METHODOLOGY OVERVIEW

The general scheme of the proposed methodology is illustrated in Figure 2. Firstly, to capture the representative variability of the complex landscape that is analyzed in this work, a yearly input dataset is selected and downloaded from the available data sources and prepared for the posterior analysis. Then, the obtained Sentinel-2 images are processed in order to be used by the classification models. Finally, we verify the quality of the optimal classification models and measure their suitability and performance.

Figure 2 (Methodology)

- Area of Interest extractions

There are more than 700 villages in Gilgit Baltistan. All these villages were extracted using a high resolution base map through digitization. The boundaries were extracted by keeping in mind the water channel level.

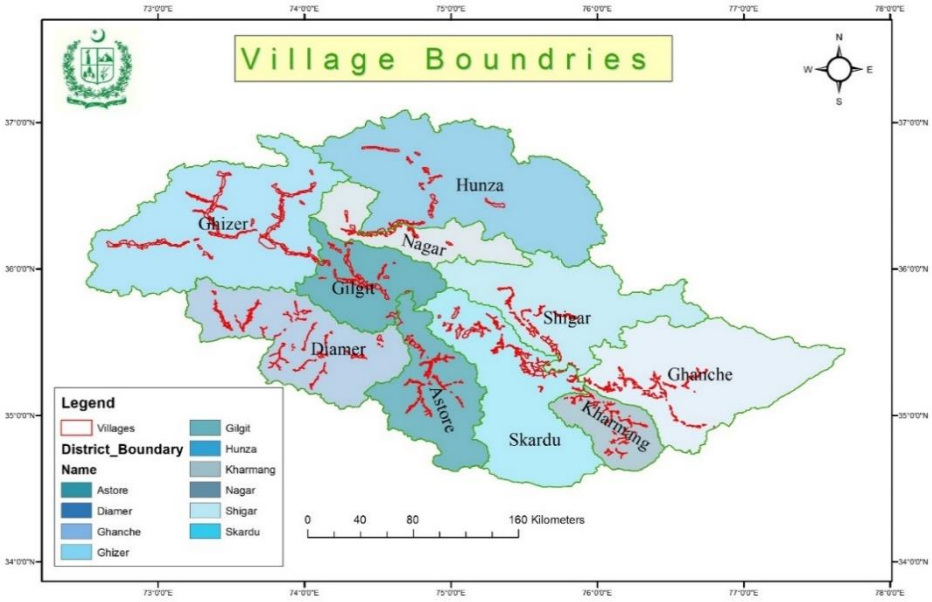


Figure 3 (Village Boundaries)

- Input dataset generation

This subsection describes the batch process that queries and downloads the required Sentinel-2 multi-temporal datasets over the Area of Interest (AOI) for its analysis, as the Figure 5 illustrates. These datasets are retrieved and prepared as the input information to be exploited by the proposed system. It is to be noted that this statistics were extracted village wise. Figure 4 shows the digitization parcels.

Figure 4(Field Sampels)

Figure 5 (Methodology)

Figure 5 shows the overall methodology. In the first place, we performed a sequential search in the Copernicus Open Access Hub (CopHub) for each month over a studied target year using the available R package getSpatialData. This package provides an easy access to the CopHub data as well as useful tools to specify and restrict the performed queries. Given the significant variability of the analyzed land categories (crops, scrubs, forest, etc.) along the different seasons of the year in the Gilgit Baltistan, as said, a representative amount of information of all the months of a natural year is retrieved to capture all the possible situations. Additionally, the retrieved information of the Sentinel-2 satellite may be altered by the presence of clouds, introducing erroneous data that may confuse the system. Thus, in order to obtain the cloud mask information and avoid these

situations, we selected only the Sentinel-2 products with processing level 1-C which include cloud mask files in the downloaded products. After each query, we filtered the results in order to select the Sentinel-2 product with the earliest ingestion date that had less or equal cloud coverage percentage than 25%. Before making the final selection, an additional AOI coverage check was performed to account for partial matches between the covered product area and the defined AOI, discarding the selected product in that case and performing the check on the next one. The identified information is post-processed and prepared for its analysis and classification. We downloaded the selected data packages, extracting the 10m resolution bands (B2, B3, B4 and B8) that contain information about the visible light spectrum and the Near Infra-Red (NIR) band. The three classical RGB bands are portrayed by the B4, B3 and B4 bands. Whereas the NIR band is represented by the B8 band.

These bands are used to calculate the Normalized Difference Vegetation Index (NDVI) for the studied region, The NDVI index generally represents the difference between the reflectance of the NIR band and the red band from the visible spectrum, being previously used in numerous land cover applications due to its suitability to identify phonological differences among vegetation types. Finally, we clip every band to the AOI extent and checked if any point of the cloud mask is contained on the AOI, extracting the cloud mask file for its future use in that case. After that the supervised classification technique were used in every village AOI to classify the area into four major categories. (Definitions have been provided at the start of the reports).

- Cultivable lands
- Marginal Lands
- Orchards/Plantations
- Cropland
- Built-up Lands

Chapter 3

RESULTS AND DISCUSSIONS

Gilgit Baltistan is divided into three divisions and these divisions are further divided into ten districts.

Divisions	Districts
Baltistan	Skardu
	Kharmang
	Ghanche
	Shigar
Diamer	Astore
	Diamer
Gilgit	Gilgit
	Hunza
	Nagar
	Ghizer

Table 1(Admin Setup)

Further distribution of administrative divisions are as under as part of the agriculture statistics. The detail here is a combined version of all the villages processed into their respective statistics. As we consider this report as part of the longer version so here we will provide detailed district wise statistics focusing on agriculture will be provided.

1. DISTRICT HUNZA

- Total Area: **11598.4 Km Sq.**
- Agriculture Land: **12596.1 (Ha)**
- Total Revenue Villages: **46**
- Sub Division:**1**
- Union Council:**8**

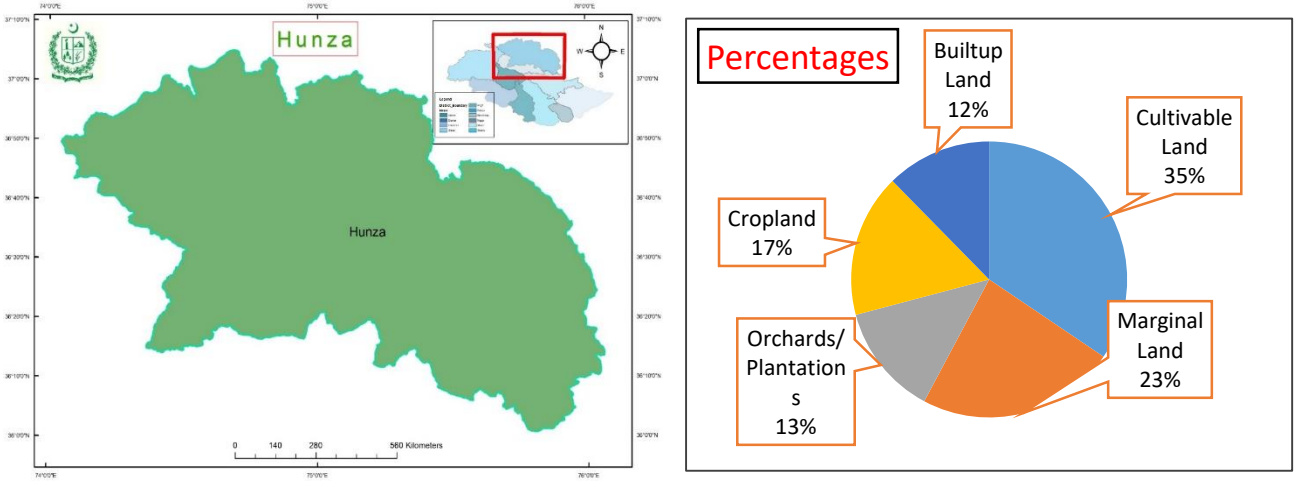


Figure 6 (Hunza)

LULC	Area(Ha)	Percentage
Cultivable Land	4339.2	34.4
Marginal Land	2940.3	23.3
Orchards/Plantations	1646.8	13.1
Cropland	2114.4	16.8
Built-up Land	1555.3	12.3
Total	**12596.1**	**100.0**

Table 2(Hunza Statistics)

2. DISTRICT NAGAR

- Total Area: **3294.1 Km Sq.**
- Agriculture Land: **7644.77 Ha**
- Total Revenue Villages:**39**
- Sub Division:1
- Union Council:**7**

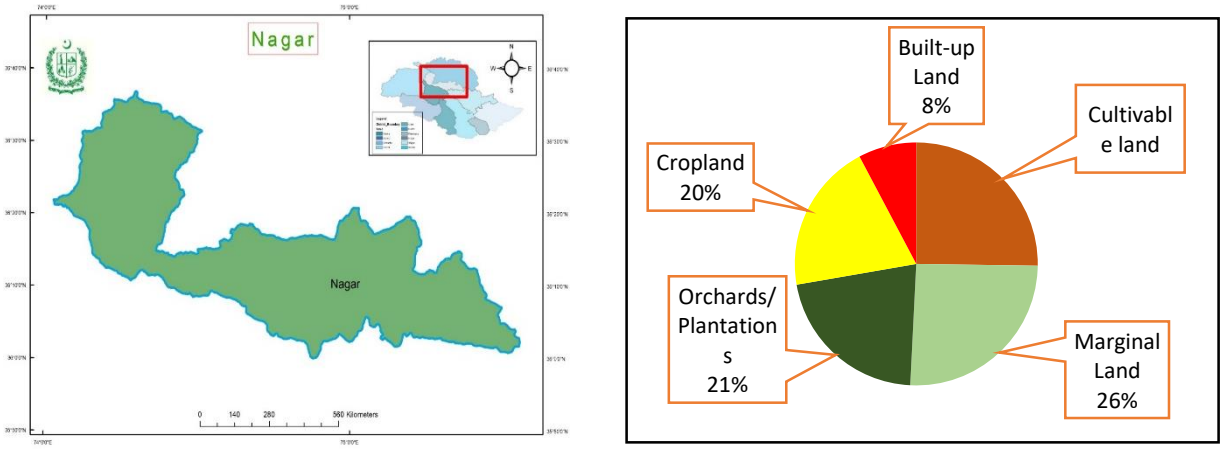


Figure 7(Nagar)

LULC	Area (Ha)	Percentage
Barren Land	1929.21	25.24
Marginal Land	1954.20	25.56
Orchards/Plantations	1640.94	21.46
Cropland	1528.68	20.00
Built-up Land	591.74	7.74
Total	**7644.77**	**100.00**

Table 3 (Nagar Statistics)

3. DISTRICT DIAMER

- Total Area: **6995.2 Km Sq.**
- Agriculture Land: **20324.5 Ha**
- Total Revenue Villages:**104**
- Sub Division: **2**
- Union Council:**11**

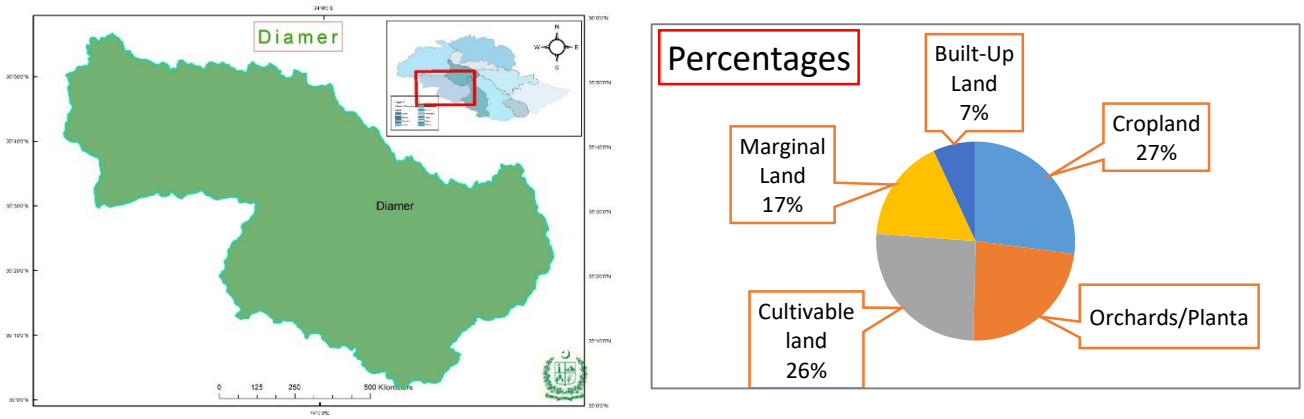


Figure 8(Diamer)

LULC Category	Area (Hectare)	Percentage
Cropland	5503.3	27.1
Orchards/Plantation	4735.5	23.3
Cultivable Land	5243.8	25.8
Marginal Land	3434.0	16.9
Built-Up Land	1407.8	6.9
Total	**20324.5**	**100.0**

Table 4(Daimer Statistics)

4. DISTRICT KHARMANG

- Total Area: **2535.49 Km Sq.**
- Agriculture Land: **7664.8 Ha**
- Total Revenue Villages: **42**
- Sub Division: **1**
- Union Council: **8**

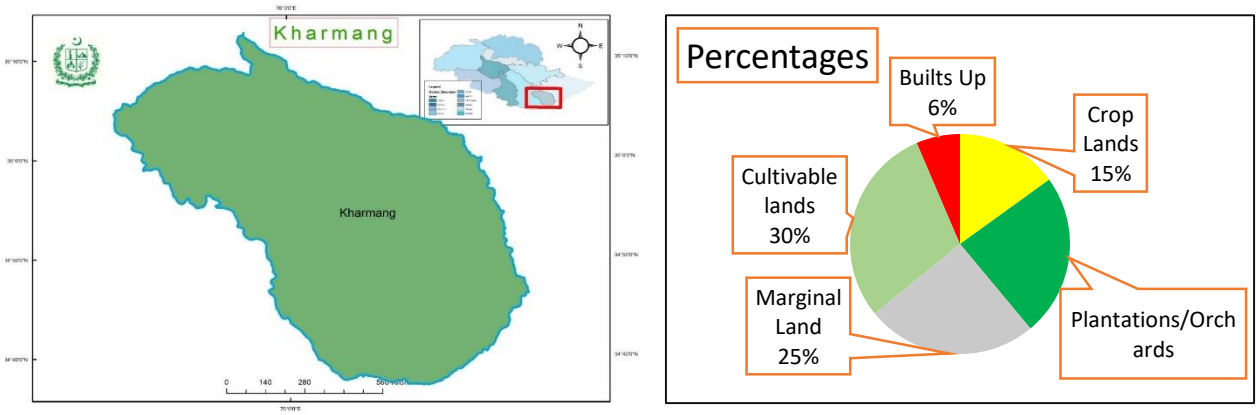


Figure 9(Kharmang)

LULC Category	Area (Ha)	Percentage
Crop Lands	1153.2	15.0
Plantations/Orchards	1832.0	23.9
Marginal Land	1928.6	25.2
Cultivable Lands	2258.1	29.5
Built Up	492.9	6.4
Total	**7664.8**	**100.0**

Table 5(Kharmang Statistics)

5. DISTRICT SKARDU

- Total Area: **7894.7 Km Sq.**
- Agriculture Land: **26887.6 Ha**
- Total Revenue Village: **78**
- Sub Division: **2**
- Union Councils: **1**

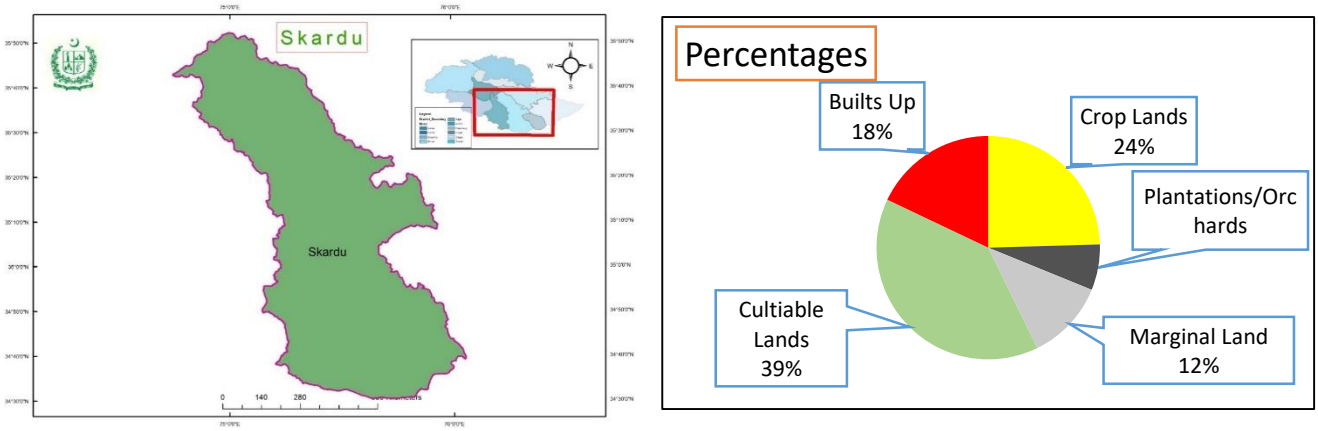


Figure 10 (Skardu)

LULC Category	Area(Ha)	Percentage
Crop Lands	6595.4	24.5
Plantations/Orchards	1782.3	6.6
Marginal Land	3118.3	11.6
Cultivable Lands	10567.6	39.3
Built Up	4823.9	17.9
Total	**26887.6**	**100.0**

Table 6 (Skardu Statistics)

6. DISTRICT GHANCHE

- Total Area: **9116.6 Km Sq.**
- Agriculture Land: **15234.55 Ha**
- Total Revenue Villages:**61**
- Sub Division: **3**

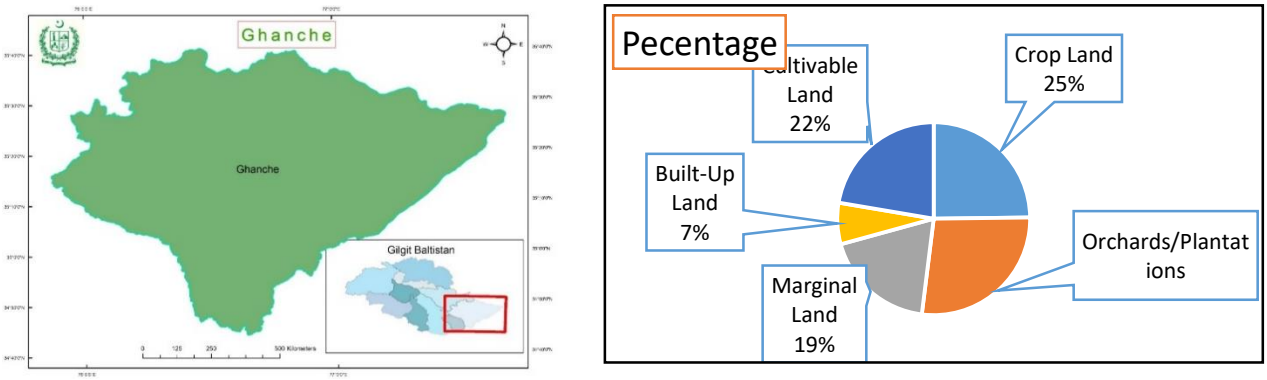


Figure 11(Ghanche)

Land Use Category	Area (Ha)	Percentages
Crop Land	3778.55	24.8
Orchards/Plantations	4139.72	27.2
Marginal Land	2857.01	18.8
Built-Up Land	1056.88	6.9
Cultivable Land	3402.39	22.3
Total	**15234.55**	**100.0**

Table 7(Ghanche Statistics)

7. DISTRICT SHIGAR

- Total Area: **7248.8 Km Sq.**
- Agriculture Land: **11052.3 (Ha)**
- Total Revenue Villages:**57**
- Sub Divisions:**1**
- Union Councils: **10**

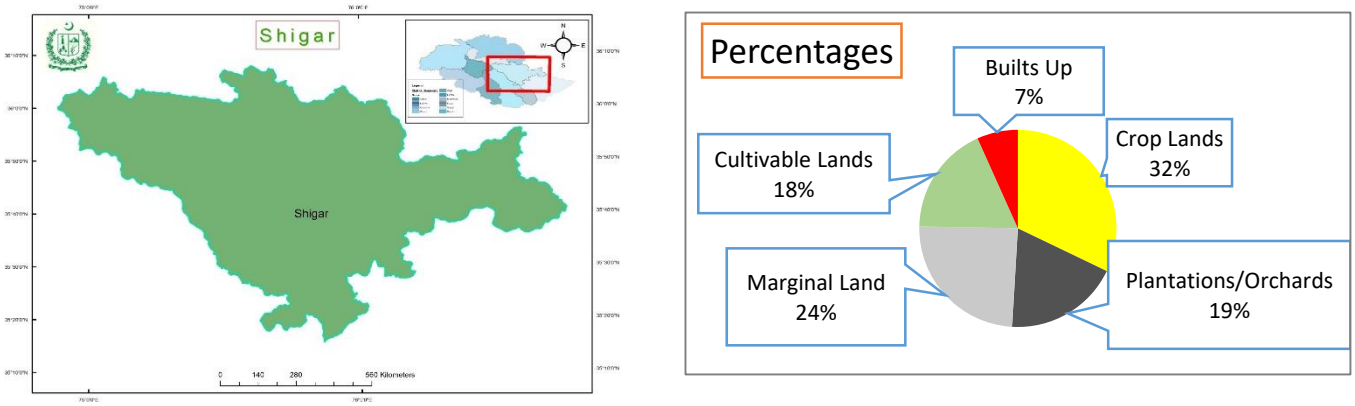


Figure 12(Shigar)

LULC Category	Area (Ha)	Percentages
Crop Lands	3551.1	32.1
Plantations/Orchards	2080.1	18.8
Marginal Land	2691.0	24.3
Cultivable Lands	1988.3	18.0
Built Up	741.9	6.7
Total	**11052.3**	**100.0**

Table 8 (Shigar Statistics)

8. DISTRICT GILGIT

- Total Area: **4123.38 Km Sq**.
- Agriculture Land: **16052.6 (Ha)**
- Total Revenue Villages:**55**
- Sub Division:**2**
- Union Council:**11**

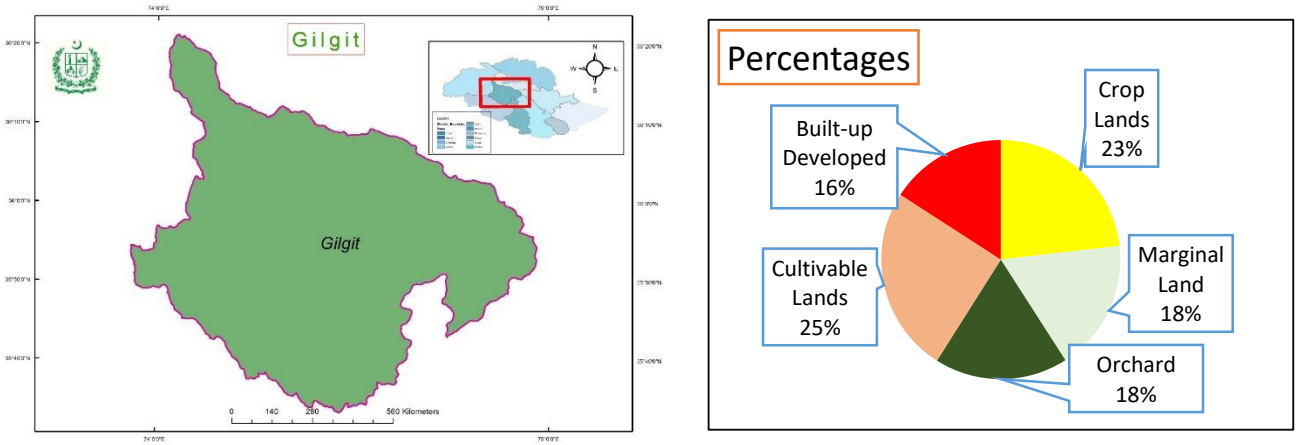


Figure 13(Gilgit)

LULC Category	Area (Ha)	Percentage
Crop Lands	3721.4	23.2
Marginal Lands	2845.9	17.7
Orchards/Plantations	2899.9	18.1
Cultivable Lands	4037.0	25.1
Built-up Lands	2548.4	15.9
Total	**16052.6**	**100.0**

Table 9(Gilgit Statistics)

9. DISTRICT ASTORE

- Total Area: **5055.74 Km Sq.**
- Total Cultivable and Cultivated Land: **16165 (Ha)**
- Total Revenue Villages:**49**
- union Councils: **8**
- Sub Division: **2**

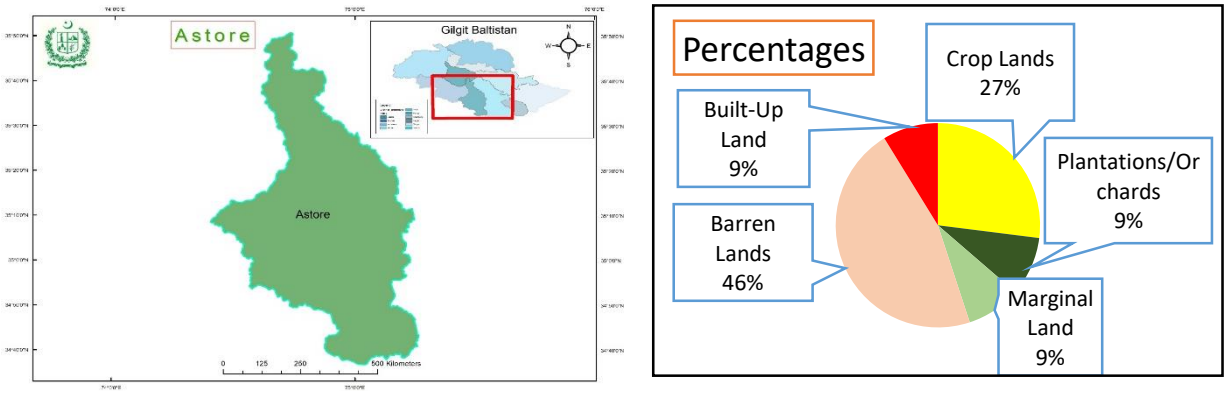


Figure 14(Astore)

LULC Category	Area (Ha)	Percentage
Crop Lands	4364.6	27.0
Plantations/Orchards	1508.2	9.3
Marginal Land	1392.5	8.6
Cultivable Lands	7479.6	46.3
Built-Up Lands	1420.1	8.8
Total	**16165.0**	**100.0**

Table 10 (Astore Statistics)

10. DISTRICT GHIZER

- Total Area: **11885.8 Km Sq.**
- Total Cultivable and Cultivated Land: **36087.1 (Ha)**
- Total Revenue Villages: **80**
- Sub Division:**2**
- Union Council: **16**

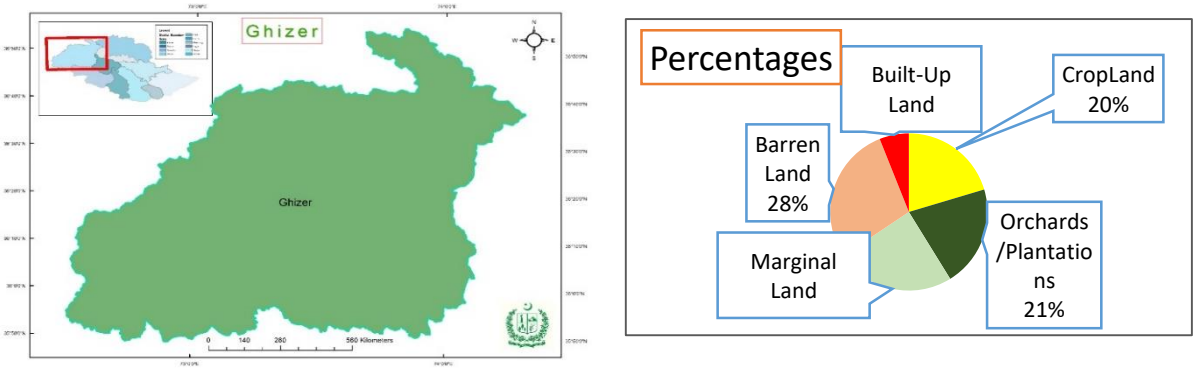
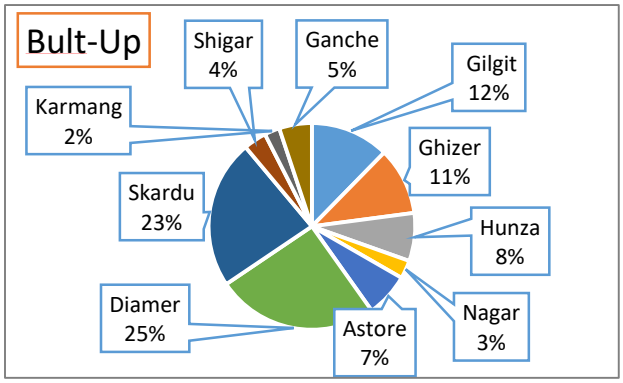


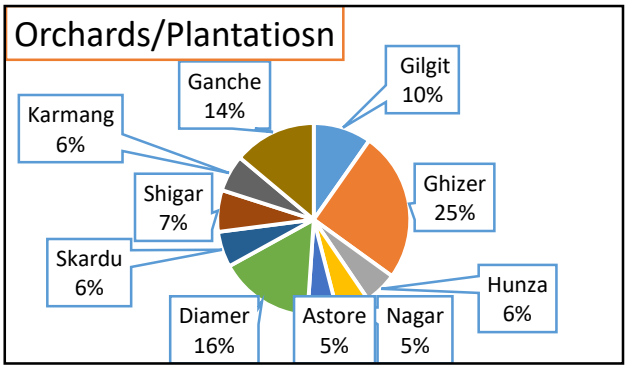
Figure 15(Ghizer)

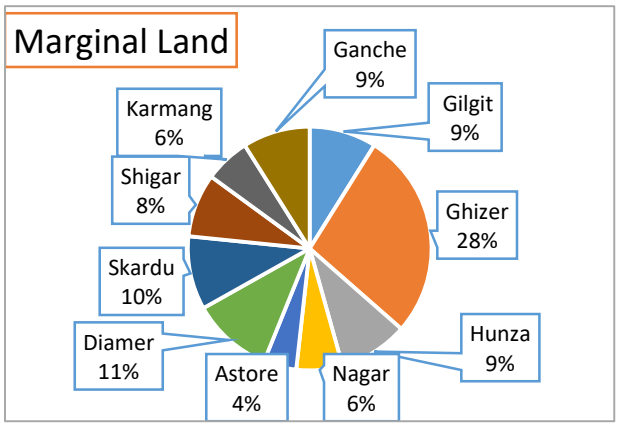
LULC Category	Area (Ha)	Percentage
Crop Land	7354.9	20.4
Orchards/Plantations	7509.5	20.8
Marginal Land	8812.1	24.4
Cultivable Lands	10226.7	28.3
Built-Up Lands	2183.9	6.1
Total	**36087.1**	**100.0**

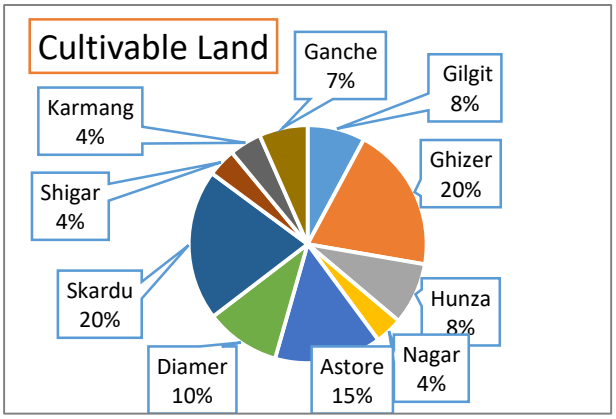
Table 11(Ghizer Statistics)

11. DISTRIBUTION OF LAND USE CATEGORIES









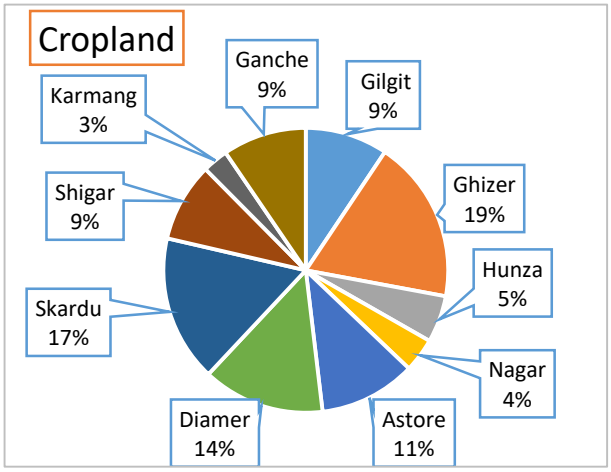


Figure 16 (LULC Statistics)

12. DIVISION WISE DISTRIBUTION

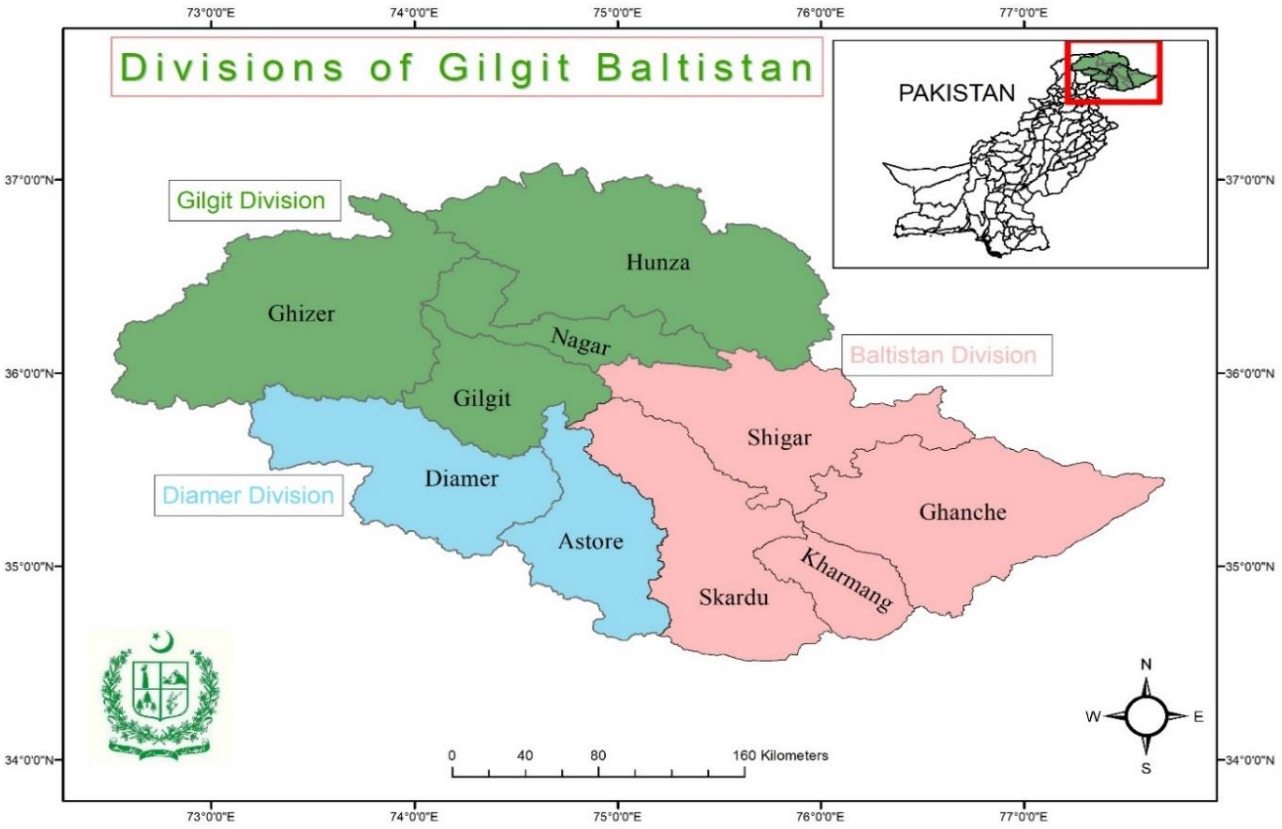


Figure 17(Divisions of Gilgit Baltistan)

13. BALTISTAN DIVISION

LULC Category	Shigar(Ha)	Skardu(Ha)	Kharmang(Ha)	Ghanche(Ha)	Total
Crop Lands	3551.1	6595.4	1153.2	3778.6	15078.3
Plantations/Orchards	2080.1	1782.3	1832.0	4139.7	9834.2
Marginal Land	2691.0	3118.3	1928.6	2857.0	10594.9
Cultivable Lands	1988.3	10567.6	2258.1	3402.4	18216.4
Built Up	741.9	4823.9	492.9	1056.9	7115.6
Total	**11052.3**	**26887.6**	**7664.8**	**15234.5**	**60839.3**

Table 12(Baltistan Division)

14. DIAMER DIVISION

LULC Category	District Diamer (Ha)	District Astore (Ha)	Total (Ha)
Cropland	5503.3	4364.6	9867.9
Orchards/Plantation	4735.5	1508.2	6243.7
Cultivable Lands	5243.8	7479.6	12723.4
Marginal Land	3434.0	1392.5	4826.6
Built-Up Land	1407.8	1420.1	2827.9
Total	**20324.5**	**16165.0**	**36489.5**

Table 13(Diamer Division)

15. GILGIT DIVISION

LULC Category	Area(Ha)	Percentage%
Crop Lands	14556.6	**20.4**
Plantations/Orchards	13600.7	**19.1**
Marginal Land	16432.6	**23.1**
Barren Lands	20409.3	**28.6**
Built Up Lands	6277.3	**8.8**
Total	**71276.5**	**100.0**

Table 14 (Gilgit Division)

16. TOTAL DISTRIBUTION OF AGRICULTURE STATISTICS

	District Wise Area Distribution (Ha)										
LULC	**Gilgit**	**Ghizer**	**Hunza**	**Nagar**	**Astore**	**Diamer**	**Skardu**	**Shigar**	**Karmang**	**Ghanche**	**Total**
Crop Land	3721	7355	2114	1529	4365	5503	6595	3551	1153	3779	39666
Orchards	2900	7510	1647	1641	1508	4736	1782	2080	1832	4140	29775
Marginal Land	2846	8812	2940	1954	1393	3434	3118	2691	1929	2857	31974
Built-Up Land	2548	2184	1555	592	1420	5244	4824	742	493	1057	20659
Cultivable Land	4037	10227	4339	1929	7480	5244	10568	1988	2258	3402	51472
Total	**16053**	**36087**	**12596**	**7645**	**16165**	**24160**	**26888**	**11052**	**7665**	**15235**	**173545**

Table 15(District Wise Statistics)

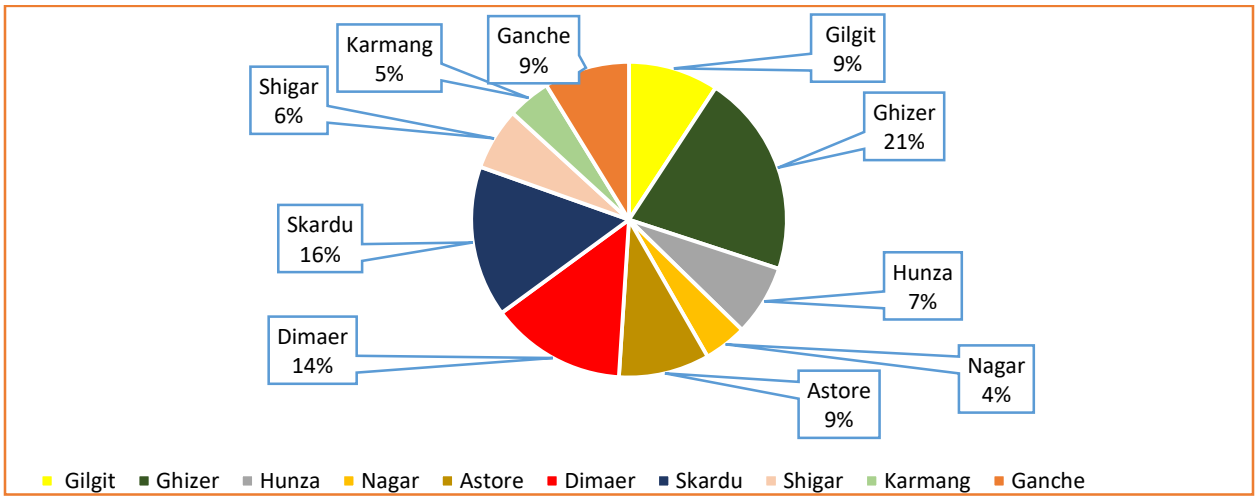


Figure 18(Overall Statistics Percentages)

LULC Category	Area(Hectare)	Percentage
Agriculture Covered Land	122073.46	**1.75**
Other Land Use	6852772.54	98.25
Total	6974846	100.00

Table 16(Overall Statistics)

Chapter 4

1. CONCLUSIONS AND RECOMMENDATIONS

With an accuracy of more than 95 percent it is estimated that the total agriculture area is 122073.46 Hectors and total area of 51471.85 Hectors is cultivable. Total agriculture area is **1.75** percent of the total area of Gilgit Baltistan. It is also concluded that Ghizer district of Gilgit Baltistan has large portion of agriculture area while Nagar district has the least portion of agriculture area. It is also concluded that the land available but not cultivable so far can easily be used for agriculture with a minute funding to make new water channel.

GIS and RS is an automatic tool in order to extract agriculture statistical data with more than 96 percent accuracy. It is to be recommended that a detailed base line data is the need of the hour. As Federal Bureau of Statistics, Islamabad excludes this area. That is why no reliable database is available in Gilgit-Baltistan. Furthermore, with the use of GIS and RS a database is being developed to generate accurate & reliable agriculture statistics for GB under the same project. It is concluded that the overall agriculture areas in Gilgit Baltistan are:

Total Area of Cultivated land is: 122073.46 Hectors

Total Area of Cultivable land is: 51471.85 Hectors

It is now highly recommended to be included the following aspects in the next report:

- GPS surveying to delineate village agriculture boundaries below channel and maps agriculture nurseries, labs
- Horticulture mapping using geospatial technologies
- Identification of plant pests and diseases and drought monitoring using GIS and RS technology.
- Land use assessment of barren areas in GB using Remote Sensing.
- GIS and Plant Conservation mapping and assessment.
- GIS & RS based fertilizer suitability mapping for wheat, maize and fruits
- GIS Mapping of Soil Compaction and Moisture Distribution for Precision Tillage and Irrigation Management.

Agriculture Geo Statistics 2021 of GB including other Land Uses extracted through GIS and RS under the project "Strengthening of Agriculture Secretariat and E Agriculture Extension Services in GB"

Gilgit Division

Land Uses	Gilgit (Ha)	%	Ghizer (Ha)	%	Hunza (Ha)	%	Nagar (Ha)	%	Total (Ha)	Total %
Crop Lands	3721	23.2	7355	20.4	2114	16.8	1529	20.0	13190	20.4
Orchards/Plantations	2900	18.1	7510	20.8	1647	13.1	1641	21.5	12057	18.6
Marginal Lands	2846	17.7	8812	24.4	2940	23.3	1954	25.6	14598	22.6
Built-Up Lands	2548	15.9	2184	6.1	1555	12.3	592	7.7	6287	9.7
Cultivable Lands	4037	25.1	10227	28.3	4339	34.4	1929	25.2	18603	28.7
Total	**16053**	**100.0**	**36087**	**100.0**	**12596**	**100.0**	**7645**	**100.0**	**64736**	**100.0**

Baltistan Division

Land Uses	Shigar(Ha)	%	Skardu(Ha)	%	Kharmang(Ha)	%	Ghanche(Ha)	%	Total	Total %
Crop Lands	3551.1	32.1	6595.4	24.53	1153.2	15.0	3778.6	24.8	15078.3	24.8
Plantations/Orchards	2080.1	18.8	1782.3	6.629	1832	23.9	4139.7	27.2	9834.2	16.2
Marginal Lands	2691	24.3	3118.3	11.6	1928.6	25.2	2857	18.8	10594.9	17.4
Cultivable Lands	1988.3	18.0	10567.6	39.3	2258.1	29.5	3402.4	22.3	18216.4	29.9
Built Up Lands	741.9	6.7	4823.9	17.94	492.9	6.4	1056.9	6.9	7115.6	11.7
Total	**11052.3**	**100.0**	**26887.6**	**100**	**7664.8**	**100.0**	**15234.5**	**100.0**	**60839.3**	**100.0**

Diamer Division

Land Uses	Diamer (Ha)	%	Astore (Ha)	%	Total (Ha)	Total %
Crop land	5503.3	27.1	4364.6	27.0	9867.9	27.0
Orchards/Plantations	4735.5	23.3	1508.2	9.3	6243.7	17.1
Cultivable Lands	5243.8	25.8	7479.6	46.3	12723.4	34.9
Marginal Lands	3434	16.9	1392.5	8.6	4826.6	13.2
Built-Up Lands	1407.8	6.9	1420.1	8.8	2827.9	7.7
Total	**20324.5**	**100.0**	**16165**	**100.0**	**36489.5**	**100.0**

END