



HEALTH

Sargodha Regional Development Plan



The Urban Unit

Urban Sector Planning & Management Services Unit (Pvt.) Ltd.



Urban Sector Planning and Management Sector Unit (Pvt.) Ltd. has prepared this report as Sectoral Plan for Integrated Master Plan of Cholistan related to the Health component, a sub-task defined under the approved scheme titled “Integrated Master Plan of Cholistan Development Authority” bearing GS No.3973 was reflected in ADP 2020-21. Maximum care and caution were observed while developing this document.

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Chapter 1: Introduction

The mandate of providing Health in the division of Sargodha is split between the Primary & secondary healthcare and specialized health care in Punjab. Where the former provides basic healthcare services through the unit like; BHUs, RHC, MCH centers, Dispensaries, THQs and DHQs etc. And Specialized Health & Medical Education department caters the units like; Specialized Hospitals, Medical Education, Medical Universities/ Colleges/ Schools, teaching hospital, nursing education, Health agencies, Punjab Health foundation, Punjab Pharmacy Council etc. A great number of private, small clinics and health units also operates in the region.

The situation of the health sector indicates a miserable picture for the division. Multiple factors contribute to poor health care services, low accessibility to health care services, low quality of human resource for health, weak Health information management system (HIMS) and poor progress towards SDGs. Whereas, lack of immunization and lack of health consultation are also some of the major constraints; that add to the complication of healthcare service provision.

Indicators	WHO-recommended 4 Antenatal visits	Births Attended by Skilled Personals
Minimum threshold	100%	100%
Province Average	48.0	64.7
Sargodha	49.3	70
Bhakkar	34.3	52.7
Khushab	38.7	68.7
Mianwali	53.6	68.5

Figure 1: Antenatal visits and birth by skill attended rates
Source: MICS, 2018

Health Situation in Sargodha division and its districts is mixed against Punjab's average. A district wise analysis of Mother & Child health care parameters reveals that they are the poor to moderate in the districts of Sargodha as compare as to Punjab average¹.

¹ See below indicator list of MICS, 2019

Overall, health indicators are poor in the province and far below the SDGs. The table below shows the key performance indicators of Health, taken from PSLM 2020 and MICS 2018 reports.² They provide an overview of Health landscape in Sargodha division, which are compared against the statistics of Punjab considered as the bare minimum standard. The cells highlighted in green represent satisfactory performance of a district, red cells reveal underperformance and yellow cells are indicative of same performance as of Punjab. As it can be seen, the Sargodha KPI's for the division are usually highlighted with the red cells. Red performance indicators are needed to invest for development in health sector.

Table 1: Key Performance Indicators PSLM 2019, Health

Indicator	Description	Categorization	Punjab	Bhakhhar	Khus-hab	Mianwali	Sargodha
Percentage Distribution of Population Fallen Sick or Injured During Last	(Two Weeks of The Interview and by Health Consultation).	Sick or injured	6.79	6.05	9.43	5.54	8.6
		Health Consultation	96.37	98.2	94.51	97.3	93.02
Percentage of Children Aged 12-23 Months That Have Been Immunized	A: Based on Recall - At Least One Immunization	Urban	99	94	100	97	100
		Rural	98	98	97	100	100
		Total	98	98	98	100	100
Percentage of Children Aged 12-23 Months That Have Been Immunized	B: Based on Record - Fully Immunized	Urban	81	85	89	95	86
		Rural	81	82	89	91	89
		Total	81	82	89	91	88
Percentage of Children Aged 12-23 Months That Have Been Immunized	C: Based on Recall and Record - Fully Immunized	Urban	88	92	97	97	90
		Rural	89	88	95	97	98
		Total	89	88	95	97	96
Percentage of Children 12-23 Months That Have Been Immunized	By Type Of Antigen-Based on Record	BCG	87	92	90	93	91
		PENTA ₁	86	90	90	93	90
		PENTA ₂	84	87	89	93	89
		PENTA ₃	84	87	89	93	89
		PNEU ₁	85	86	90	93	90
		PNEU ₂	84	86	89	93	89

² Pakistan Social and Living Standards Measurement Survey, 2019 and Multiple Indicator Cluster Survey, 2018

Indicator	Description	Categori- zation	Pun- jab	Bhak- har	Khus- hab	Mian- wali	Sargo- dha
		PNEU ₃	83	86	89	93	89
		POLIO ₁	87	91	90	93	92
		POLIO ₂	83	87	89	93	88
		POLIO ₃	82	86	89	91	88
		MEASLES	83	86	89	92	89
Percentage of Children 12-23 Months that have been Immunized	By Type of Antigen- Based on Record and Recall.	BCG	96	98	98	99	99
		PENTA ₁	95	96	98	99	99
		PENTA ₂	92	94	95	99	97
		PENTA ₃	92	93	95	99	97
		PNEU ₁	94	92	97	99	99
		PNEU ₂	92	92	95	99	97
		PNEU ₃	91	92	96	99	98
		POLIO ₁	94	96	96	99	98
		POLIO ₂	92	94	95	99	97
		POLIO ₃	90	92	95	97	96
		MEASLES	91	93	95	98	97
CHILDREN UNDER 5 SUFFERING FROM DIARRHEA IN PAST 15 DAYS-BY PROVINCE AND DISTRICT		URBAN	5	1	2	4	2
		RURAL	6	4	4	5	3
		TOTAL	6	4	4	5	3
Treatment Of Diarrhoea In Children Under 5 Years	A. Diarrhoea Cases Where A Practitioner Was Consulted	URBAN	89	100	61	100	87
		RURAL	90	95	91	95	96
		TOTAL	90	95	87	96	95
TREATMENT OF DIARRHOEA IN CHILDREN UNDER 5 YEARS		URBAN	73	0	0	100	87
		RURAL	77	60	61	83	76
		TOTAL	76	58	53	85	78
Pregnant Women that have received Tetanus Toxoid Injection	Percentage of Pregnant Women	Urban	87	98	94	93	98
		RURAL	82	91	91	82	93
		TOTAL	83	92	92	84	95

Table 2: Key Performance Indicators MICS 2019, Health

Thematic Area	Indicator	Pun- jab	Sargodha DIV	Sargo- dha	Bhak- kar	Khus- hab	Mian- wali
Neonatal, post-neonatal, infant, child and under-five mortality rates for the five year period preceding the survey, by socioeconomic characteristics, Punjab, 2017-18	Neonatal mortality rate	40.96	53.08	53.07	55.85	53.44	49.36
	Post-neonatal mortality rate	19.24	18.13	18.62	18.15	18.54	16.63
	Infant mortality rate	60.2	71.21	71.69	74	71.98	65.99
	Under-five mortality rate	68.85	79.18	77.7	78.19	85.59	79.25
Percentage of women currently married who are using:	No method	65.65	68.53	65.66	66.52	71.46	75.24
	Any method	34.35	31.47	34.34	33.48	28.54	24.76
Family Planning	Unmet need for family planning	17.85	18.58	17.47	15.03	23.59	20.98
	Met need for family planning (currently using contraception)	34.35	31.47	34.34	33.48	28.54	24.76
	Total demand for family planning	52.2	50.04	51.81	48.51	52.13	45.74
ANC	All types of antenatal care (doctor, nurse, LHW, Midwife, tradition, other)	88.7	87.19	84.07	89.93	85.66	92.75
	No antenatal care	11.3	12.81	15.93	10.07	14.34	7.25
Percentage of women who, during the pregnancy of the most recent live birth, had:	Blood pressure measured, urine and blood sample taken, weight measured, importance of spacing and information provided for family planning methods ²	11.44	8.19	11.2	3.25	12.88	2.92
	Percentage of women who received at least 2 tetanus toxoid containing vaccine doses during the	69.7	73.69	75.33	68.93	67.24	80.61

	pregnancy of the most recent live birth						
Place of delivery	Delivered in health facility(public / private)	73.26	76.2	81.22	67.63	71.5	77.98
PNC	Post-natal health check for the newborn	69.58	71.86	69.32	75.21	62.63	81.53
	Post-natal health check for the mother(in facility or at home)	70.74	74.77	73.83	74.81	65.5	84.57
Percentage of ever married women age 15-49 years who know the main ways of preventing HIV transmission, percentage who know that a healthy-looking person can be HIV-positive, percentage who reject common misconceptions, and percentage who have comprehensive knowledge about HIV transmission, Punjab, 2017-18	Percentage with comprehensive knowledge woman HIV	4.31	2.89	2.11	6.29	0.84	2.76
	Percentage with comprehensive knowledge men HIV	9.4	3.93	3.16	3.13	1.64	8.71

Chapter 2: Methodology

2.1: Strategic Direction

The strategic directions for Health Plan are extracted from the following policy documents of the Government of the Punjab, for synching short-term, medium-term and long-term goals provincial goals:

Linkages between Health Plan and Punjab Health Sector Strategy 2019-2028

The Punjab Health Sector Strategy 2019-28 provides the framework for the future planning, management and service delivery for Punjab Health Departments for the next decade. The Strategy focusing on leading Punjab towards better performance for attaining the desired goal of providing quality healthcare to the people. Following are some of the strategic interventions identified in Punjab Health Sector Strategy, which are also included in this plan:



Table 2: Thematic areas of interventions as per Punjab Health Sector Strategy 2019-2028

Sr.#	Punjab Health Sector Strategy 2019-2028		Proposed interventions in the Health Plan
	Thematic Areas	Strategic Interventions	
1	Reproductive Maternal Newborn Child Health, Nutrition & Family Planning	Establish MNCH Hospitals in public sector as well as in partnership with private sector which may be funded by Punjab Health Foundation	<ul style="list-style-type: none"> • Construction of new building and of MCH center Bhakker and MCH center Kallar Kot • Upgradation of Government Mian Maula Bakhsh Hospital to Mother & Child Hospital

2	Medicines and Biomedical Equipment	Proper storage of medicines at provincial and district level	<ul style="list-style-type: none"> • Construction of medicine store at: • THQ Noorpur Thal Khushab, • THQ Mankera Bhakkar • THOs Sargodha
3	Health Management Information System	Develop and implement a uniform and Tertiary-level Health Information System	<ul style="list-style-type: none"> • Digitalization of EMR system of 3 THQs in Mianwali

Linkages between Health Plan and National Reference Manual on Planning and Infrastructure Standards 1983

The Manual identifies major standards and guidelines for the establishment of both primary and secondary health facilities such as coverage area, types of facilities provided etc. To facilitate the geographical distribution of health facilities, the manual has set a minimum standard of 2 beds/1000 population in the region. The table below shows the existing bed capacity in health facilities of Cholistan and the required beds per population as per the National Reference Manual on Planning and Infrastructure Standards.

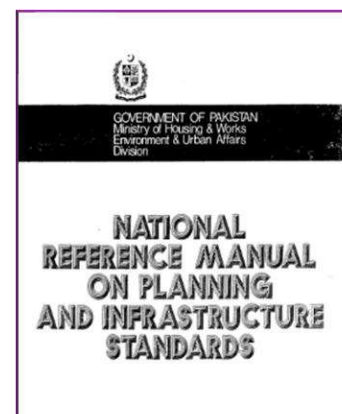


Table 3: Required Beds as per standards for health facilities

Districts	Population (Census 2017)	Existing Beds (PDS 2019)	Beds per 1000 population	Required beds per population
Sargodha	1.3 million	2087	0.56	1.56
Mianwali	1.5 million	753	0.49	1.51
Khushab	3.7 million	695	0.54	1.46
Bhakker	1.6 million	721	0.49	1.51
Total	8.1 million	4256	-	-

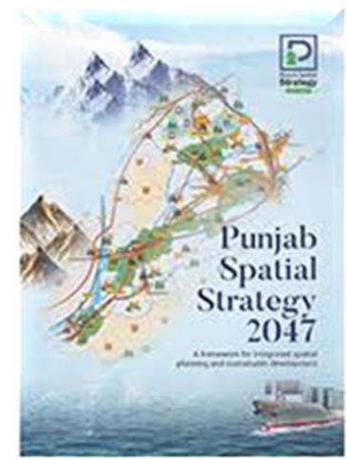
Thus, to increase the beds to population ratio in the region, following types of intervention are identified in the plan:

1. Upgradation of existing health facilities such as upgradation of BHUs to RHC level facilities, expansion of emergency block of THQ Noorpur Thal in Khushsab to increase bed capacity etc.
2. Construction of new facilities such as BHUs in Swance, Mianwali and Sahiwal, Sargodha.

Linkages between Health Plan and Punjab Spatial Strategy

2018-2047

For the achievement of SDGs, PSS calls for an integrated health eco-system with adequate expenditure on health sector targeting the most deprived districts on high priority. The figure below depicts the health-related disparities and priority zones, based on the Health Dimension Index, incorporating major health indicators like infant mortality rate, child mortality rate (aged under 5), population diagnosed with major diseases (Hepatitis and Tuberculosis), immunization coverage and percentage of cases for pre- and post-natal consultation. Only focusing on the Sargodha division, it can be seen that the district Sargodha, Khushab, Mianwali and Bhakker are medium priority districts in terms of healthcare provision and performance. These are lagging behind as compared to their neighboring districts which are Attock, Jhelum, Faisalabad and Gujrat. PSS points out that health infrastructure development needs to be accounted for prevalent inequalities in the South to bring these regions at par with Central and North Punjab.



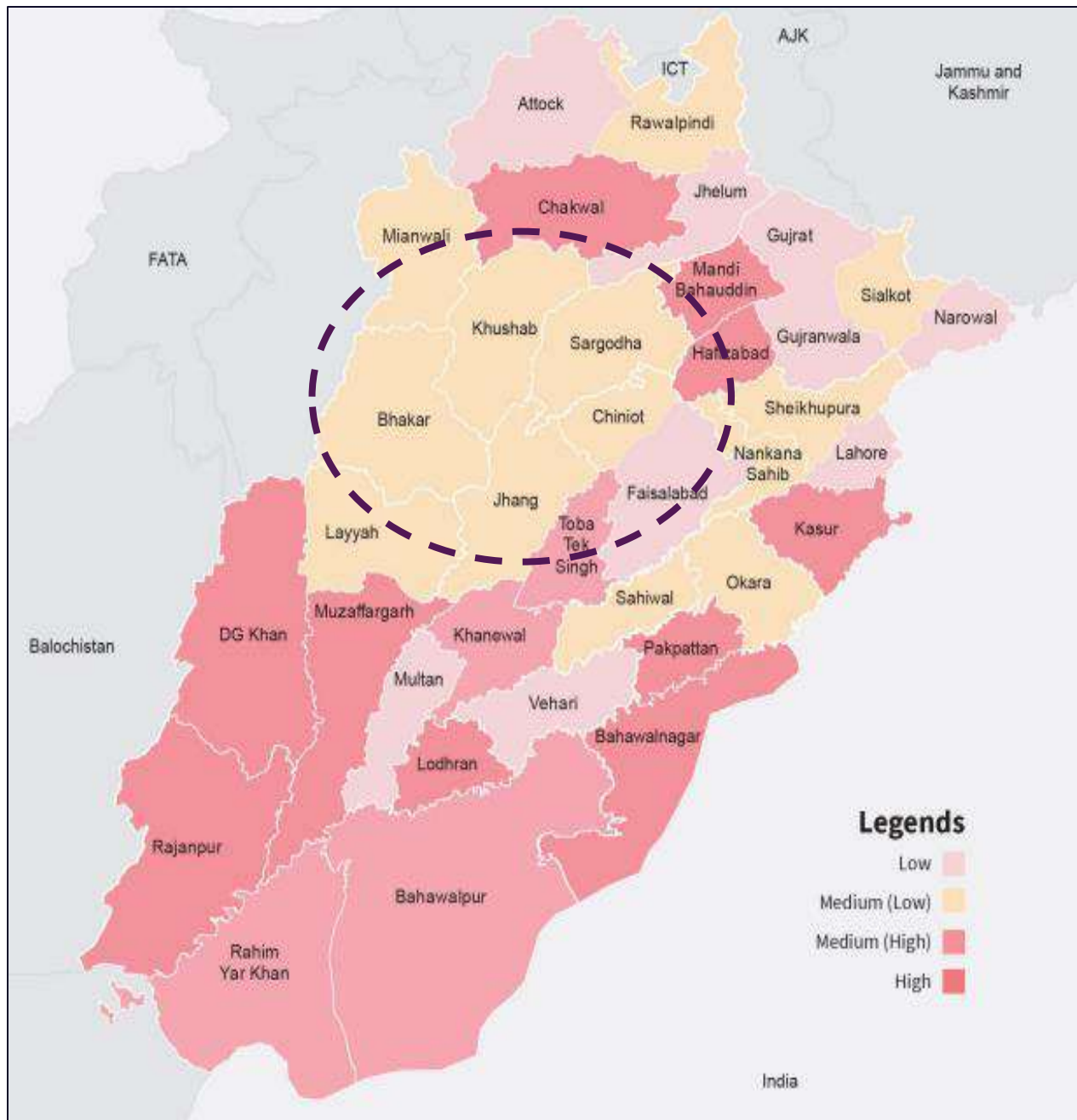
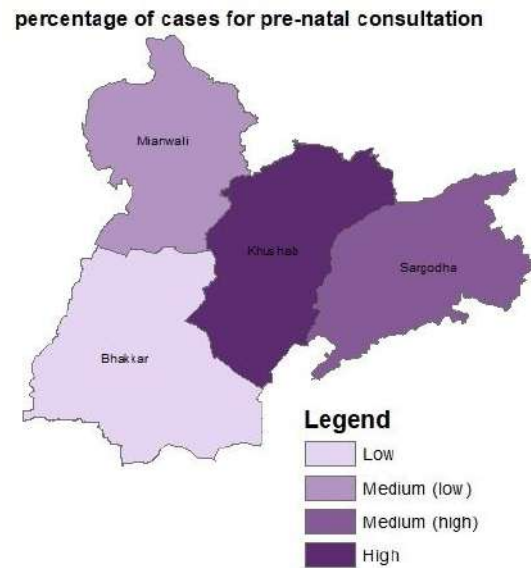
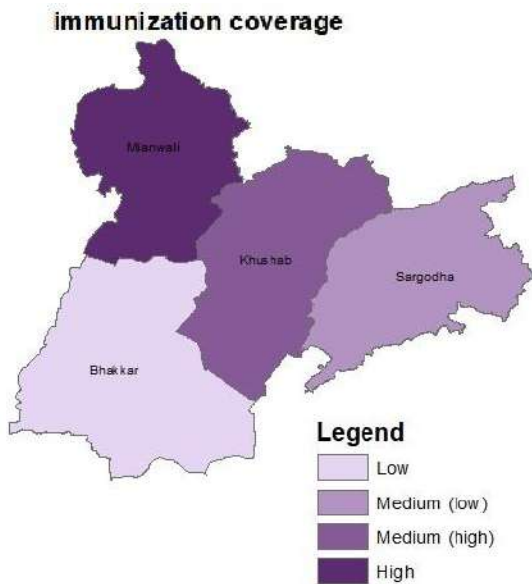
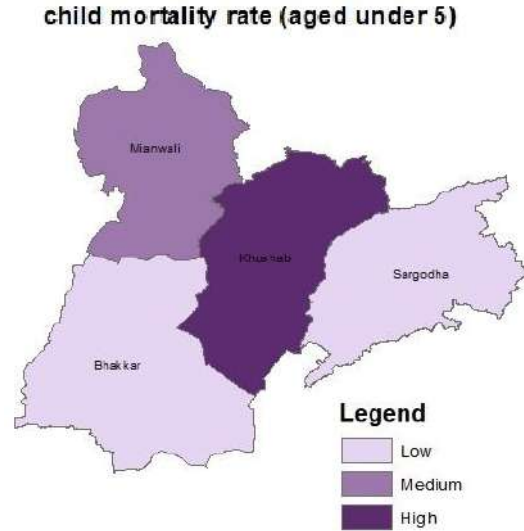
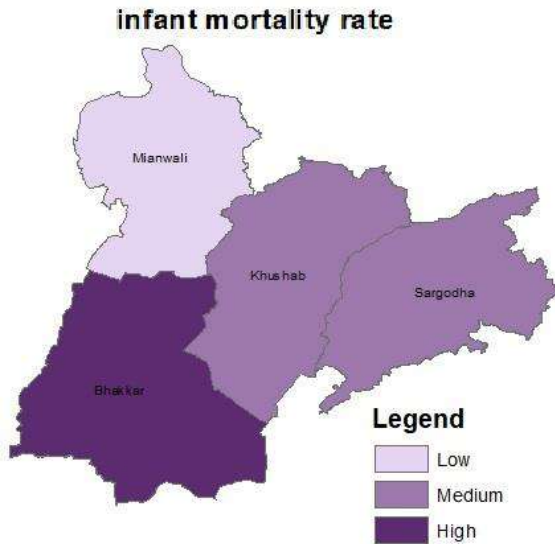


Figure 2: Sargodha division as a priority area for health interventions

Source: Punjab Spatial Strategy (PSS) 2047

For deeper analysis, heat maps are constructed for Sargodha Division, highlighting the status on each district on Mother and Child Healthcare (MCH) indicators. There are significant disparities between the regions. For instance, the percentage of cases for post-natal consultation is as high as 50% in Mianwali district and is as low as 29% in Bhakker

district. Similarly, immunization coverage and percentage of pre-natal consultation is also the lowest in Bhakker which should be focused.



percentage of cases for post-natal consultation



Figure 3: Regional disparities on health-related indicators

Source: MICS 2017-18 and PSLM 2019-20

Thus, Khushab and Bhakker districts are focused which are performing low in the division. On the other hand, Sargodha being the economic hub has the highest proportion of budget.

2.2 Approach and Methodology

The project had two distinct phases. The first phase includes a detailed assessment and situation analysis of the region and identification of gaps using the mixed method research (quantitative and qualitative) through collection and analysis of data from existing provincial and national surveys and reports, stakeholder consultations and field visits. Additionally, the spatial analysis (wherever the spatial coordinates and data available) using GIS tools was applied, which further assisted in identifying the gaps and operational issues prevailing in the health facilities. The second phase includes recommendations for sustainable interventions which can be implemented to increase the level of development in the region. Following five data collection and analysis techniques were utilized:

- Desk Review (using life course approach)
- Field visits for rapid condition assessment

- Stakeholder Engagement (using SWOT analysis)
- Spatial analysis using GIS tools

The following figure gives a preview of the methodological framework used in this health plan:

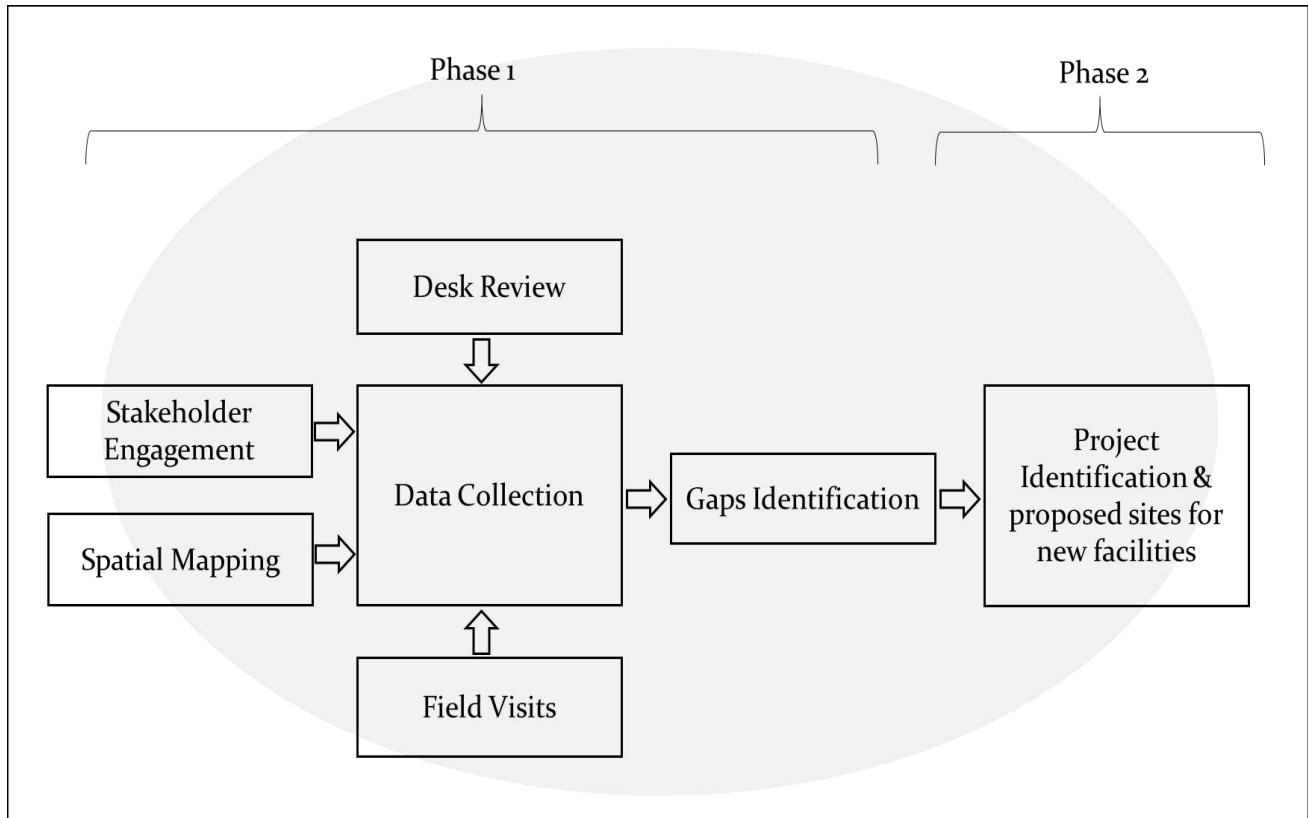


Figure 4: Methodological Framework

2.2.1 Desk Review:

Initial review of existing provincial and national reports and survey related to health was conducted to get collect baseline indicators and overview of the prevailing situation in the region. Secondary sources included District Health Information System (DHIS) dashboard³, Population Census 2017, Pakistan Standard of Living Measurement (PSLM)

³ P&SHD (2021). *District Health Information System*. Primary & Secondary Healthcare Department (P&SHD), Government of Punjab. Accessed from <<http://125.209.111.70:88/dhis/>>.

2019-20, Multiple Indicator Cluster Survey (MICS) 2017-18, Punjab Development Statistics (PDS) 2019 and others. Additionally, the Health Plan is based on the Life Course theoretical model which provided a framework for data collection. Life course model focuses on the importance of general health and wellness over the life course (i.e., childhood adolescence and adulthood) as it relates to maternal and child health. Adopting a life course approach is essential to explore the factors affecting children health and nutrition.

The figure below highlights the framework for analyzing major health indicators at different stages of life course, which gives an opportunity to explore the influencing factors on Mother and Child Health (MCH). At each point in the life course different services are required, for instance outpatient and outreach services can promote behaviour change and provide preventive care, while hospital or clinical care can provide services such as emergency obstetric care and care for small and sick newborns at large scale. This results in a matrix of integrated packages involving different types of care and the impacting health indicators at various points in a woman' life (adolescent, reproductive health, pregnancy and labour birth, post-natal maternal and newborn and child). Thus, mother and child health should be the key pillar of healthcare plan.



	Adolescent	Reproductive Health	Pregnancy, Labour & Birth	Postnatal Maternal & Newborn	Child
Hospital / Clinical Care 	% of children with ARI (infection) for whom no advise or treatment sought 2nd highest (15.8)	Received HIV counselling during antenatal care 4th highest (1.5)	Delivery assisted by skilled attendant 4th highest (79.8)	Institutional deliveries 4th lowest (76.2)	Neo-natal Mortality Rate Highest (53) Under-5 mortality 2nd highest (72)
Outpatients & outreach services 	% of children who have clinical anaemia (iron deficiency) 2nd lowest (4.5)	Unmet need for Family planning 4th lowest (18.6) Counselling on planning methods 4th lowest (13.3)	WHO recommended 4 ANC visits 3rd lowest (45.2)	Post-natal care (mother & newborn) 4th highest (68.5)	Immunization 3rd highest (92.8) Nutritional status (stunted-moderate) 4th lowest (30.7)

Figure 5: Division-wise indicators using Life course approach

Source: Framework adopted from Oxford Textbook of Global Health of Women⁴, Newborns, Children, and Adolescents and data taken from MICS 2017-18

It can be seen that Sargodha division is performing well against few indicators such as percentage of children who have clinical anaemia and immunization coverage etc. On the other hand, the situation of other major indicators such as WHO recommended four Ante-Natal Care (ANC) visits, prevalence of stunting etc. is worse in the region. The rate of neo-natal mortality rate is highest as compared to other divisions, which indicates low quality of healthcare services in the facilities.

⁴ Lawn, J & Sadoo, S. (2018). Strategies through the lifecourse to improve maternal, newborn, child, and adolescent health. In D. Devakumar (Ed.). *Oxford Textbook of Global Health of Women, Newborns, Children, and Adolescents*. Oxford University Press.

2.2.2 Health Facility Visits for Condition Assessment

For condition assessment of the health facilities, the Urban Unit healthcare sector team visited all the districts of Sargodha division during January 2022. Figure 4 highlights the spatial preview of health facilities which were visited by the Urban Unit team, among which three were in Sargodha, four were in Khushab, seven were in Bhakker and remaining two were in Mianwali. Additionally, figure 5 displays the pictorial view of the health facilities visited. A rapid condition assessment survey was done to gauge the existing situation of the health facilities. These surveys were based on Minimum Service Delivery Standards (MSDS) 2017 (Punjab Health Commission) and are attached in the appendix A.

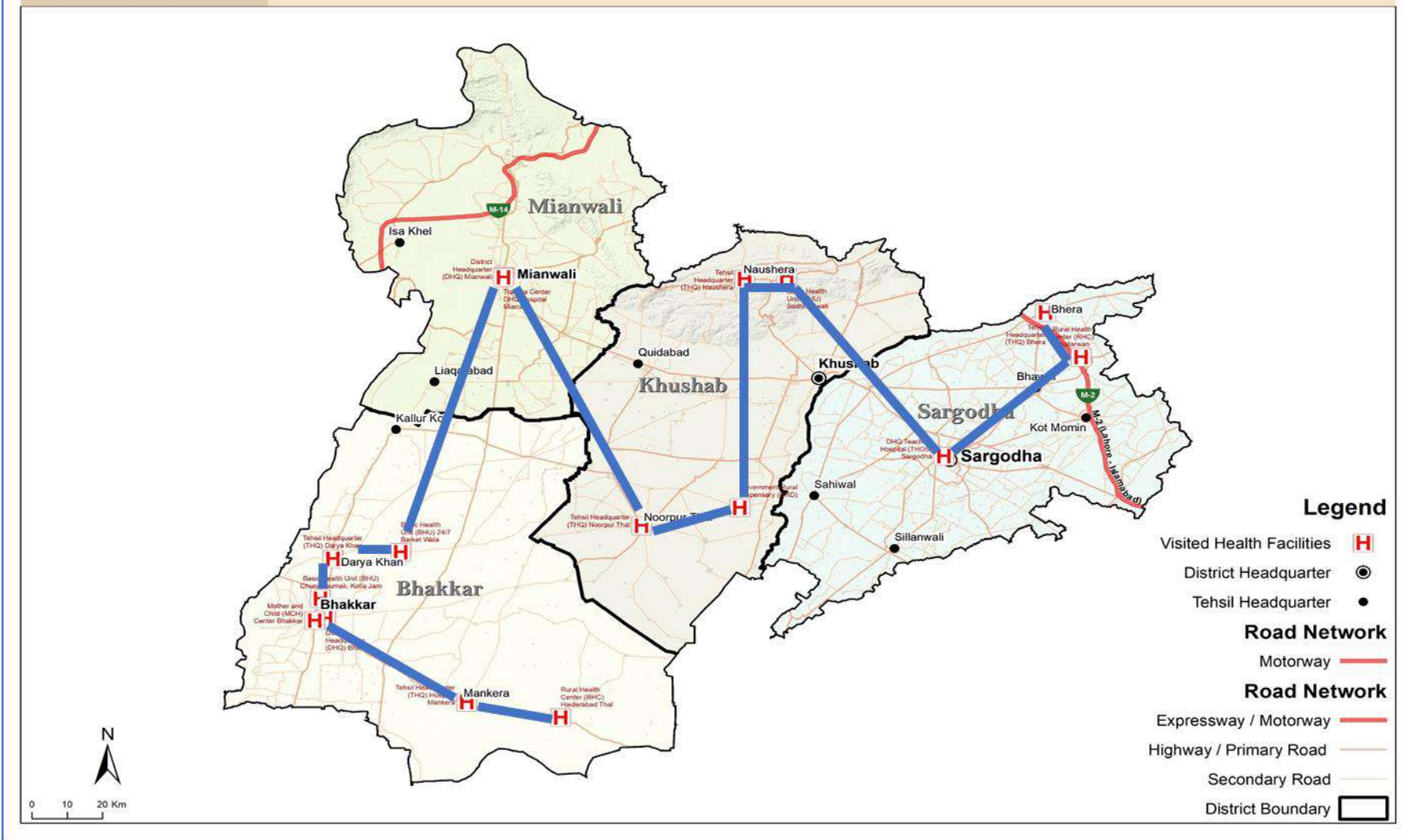


Figure 6: Spatial view of Field visit



Labour Room at RHC
Phullarwan Sargodha



BHU Bhakker



Trauma Center at Mianwali



BHU Chuni Shumali, Kotla
Jam



Medical Records at Rural
Dispensary Khushab



Emergency Ward



BHU Barket Wala



Non-functional Ward of
THQ Naushera Khushab



Signboard at MCH Center
Bhakker



Ambulance parked at RHC



RHC Hyderabad Thal Bhakker



Medicine Room at THQ
Sargodha

Figure 7: Condition Assessment Field Visits of Health Facilities of Cholistan region

Moreover, following observations were made through condition assessment exercise:

Table 4: Observations through condition assessment survey – Secondary Health Facilities

Sr. #	Name of Health Facilities	Geo-coordinates	Available Beds	Missing or non-functional equipment & utilities	Missing Services & Infrastructure
District Headquarter (DHQ) Hospital					
1	DHQ Teaching Hospital (THOS) Sargodha	32.080450822 88073, 72.6644245041 6592	731	-	Need renovation of Doctors' hostels, construction of Daycare Center, expansion of medicine and general store (space is available) & upgradation of Government Mian Maula Bakhsh Hospital to Mother & Child Hospital
2	District Headquarter (DHQ) Bhakker	31.6288794264 87206, 71.0890336970 9962	330	MRI & baby warmer machine	Need for 32 bedded cardiology block, staff residence & nursery room
3	District Headquarter (DHQ) Mianwali	32.580803990 611905, 71.5432409106 175	313	MRI & incinerator	Vacant positions: 512 out of total 742. Need improvement of residence building
Tehsil Headquarter (THQ) Hospital					
4	Tehsil Headquarter (THQ) Bhera, Sargodha	32.479859996 544086, 72.923037682 08792	40	-	Total 69 vacant out of 145. Need new OPD rooms and panelling of dentist room
5	Tehsil Headquarter (THQ) Naushera, Khushab	32.5733137345 6186, 72.1570981618 5043	60	Equipment required for Hepatitis Clinic (fridge, computer, centrifuge machine, Wt machine, BP apparatus, office chair, table. And 2	Dangerous building of TB ward & need 10 bedded emergency block and 4 consultants' rooms

				non-functional beds in paediatric ward	
6	Tehsil Head quarter (TH Q) Noorpur Thal, Khuhs hab	31.8870896021 09167, 71.8942546681 424	40	-	Need waiting area for Pharmacy, medicine store, admin block (consisting of 4 rooms) & canteen
7	Tehsil Headquarter (THQ) Hospital Mankera, Bhakkar	31.3957297554 8999, 71.449020997 09338	40	-	Vacant posts (radiographer, lab technician, blood transfusion, receptionist & eye technologist. Need revamping of Staff residences
8	Tehsil Headquarter (THQ) Darya Khan, Bhakkar	31.7947127346 85827, 71.1080736105 9598	68	CT scan, dialysis machine, digital X- ray, ventilator, cardiac monitor & chemistry analyzer	-
Trauma Center					
9	Trauma Center DHQ Hospital Mianwali	32.5783388622 48245, 71.5425154884 0762	-	Overcrowding	-

Table 5: Observations through condition assessment survey- Primary Healthcare (PHC) Facilities

Sr. #	Name of Health Facilities	Geo- coordinates	Availa- ble Beds	Missing or non- functional equipment & utilities	Missing Services & Infrastructure
Rural Health Center (RHC)					
10	Rural Health Center (RHC) Phullarwan, Sargodha	32.3560630317 55674, 73.0136031550 978	14	5 beds, 1 dental chair, 1 ECG machine, 2 fans, 1 ILR, 2 microscope, 4 office chairs, 2 office tables, 1 stretcher & 1 almirah	Public toilet needs to be improved

11	Rural Health Center (RHC) Haiderabad Thal, Bhakkar	31.35310347397 4695, 71.6881389682 5611	20	Water supply, doors, windows, electric wiring of the main building & electric transformer & electric meters of residential block	-
Basic Health Unit (BHU)					
12	Basic Health Unit (BHU) Sodhi Jaiwali, Khushab	32.579870, 72.264135	2	Delivery Table, Dilation and Curettage Kit (DNC), Eye & ENT diagnostic, Oxygen cylinder with stand and microscope	Dangerous residence building & damaged boundary wall
13	Basic Health Unit (BHU) Chuni Shumali, Kotla Jam, Bhakkar	31.6835345378 5423, 71.0759247971 0105	2	Baby weighing scale, BP apparatus, 2 Fans, 4 office chairs, 2 oxygen mask, Oxygen regulator, Stethoscope & Ultra sound machine	Need improvement in 2 non-functional rooms of residence building & sewerage system
14	Basic Health Unit (BHU) 24/7 Barket Wala	31.8127766432 60403, 71.2809225817 6052	2	Blood Glucose meter, Autoclave / Sterilisers, Blood HB test meter, 4 BP Apparatus 2 fans, Microscope & Wooden/steel almirahs	Vacant posts of dispenser and sanitary worker. Need repair of boundary wall & Residential blocks
Rural Dispensary (RD) & Mother and Child (MCH)					
15	Government Rural Dispensary (GRD), Khushab	31.936907, 72.144196	-	1 Office table, 3 chairs, 1 Patients' bench, 4 Fans, water drum & water dispenser	Low boundary wall
16	Mother and Child (MCH) Center Bhakker	31.6231760041 44828, 71.0616759529 1936	1	Unsuitable toilet facility & no electricity backup	Need for upgradation of MCH center to 24/7 & construction of new building

2.2.3 Stakeholder Engagement

The Urban Unit healthcare sector team during field visit for condition assessment of various health facilities in the Sargodha division in January 2021, also met various officials and stakeholder including:

1. District Commissioner (DC), Mianwali
2. Deputy Director (DD) Development, Mianwali
3. Deputy Director (DD) Development Bhakker
4. Chief Executive Officer (CEO) and District Health Officer (DHO), Sargodha
5. Chief Executive Officer (CEO), Bhakkar
6. Medical Superintendent at DHQ Bhakker
7. Medical Superintendent at DHQ Sargodha
8. Medical Superintendent at DHQ Mianwali
9. Medical Superintendent at THQ Naushera, Khushab
10. Medical Superintendent at THQ Noorpur Thal, Khushab
11. Admin Staff at THQ Mankera
12. Medical Doctor at Mother and Child Health (MCH) Center, Bhakker

In addition to above-mentioned meetings and field visits, the number of meetings were conducted online (over zoom) for consultations with other stakeholders of CEO, DHAs, for shared understanding of the prevailing health condition in Sargodha. Moreover, the facility data was collected through phone calls and email to the concerned persons, for remaining health facilities.



Meeting with DC Mianwali & DD Development



Meeting with DD Development Bhakker



Medical Superintendent at THQ Sargodha



Medical Superintendent at THQ Naushera



After meeting with MS DHQ Mianwali



Doctor at MCH center Bhakker



CEO and DHO at District Health Authority



Medical Superintendent at THQ Noorpur Thal



Meeting with Admin Officer THQ Mankera



Medical Superintendent at DHQ Bhakker



Meeting with CEO Health Bhakker



Medical Superintendent at DHQ Sargodha

Figure 8: Stakeholder Consultations and Meetings in Bahawalpur Division

During stakeholder consultations, the data was collected through individual interviews and respondents were asked to provide feedback through open comments approach, where they were asked to identify key challenges with relation to following four thematic areas:

- Access and Quality of Primary Healthcare (PHC) facilities
- Service Delivery at Secondary Healthcare (SHC) facilities
- Human Resource for Health (HRH)
- Health Information Management System (HMIS)

A SWOT/C Analysis (Strength, Weaknesses, Opportunities and Threat/Challenges) was created using the qualitative data gathered from the consultations. It is a strategic planning tool that can be used during need assessment to make informed decisions based upon collective input from multiple stakeholders. The SWOC analysis was done to identify the existing strengths and weaknesses in the existing healthcare system in the Sargodha region.

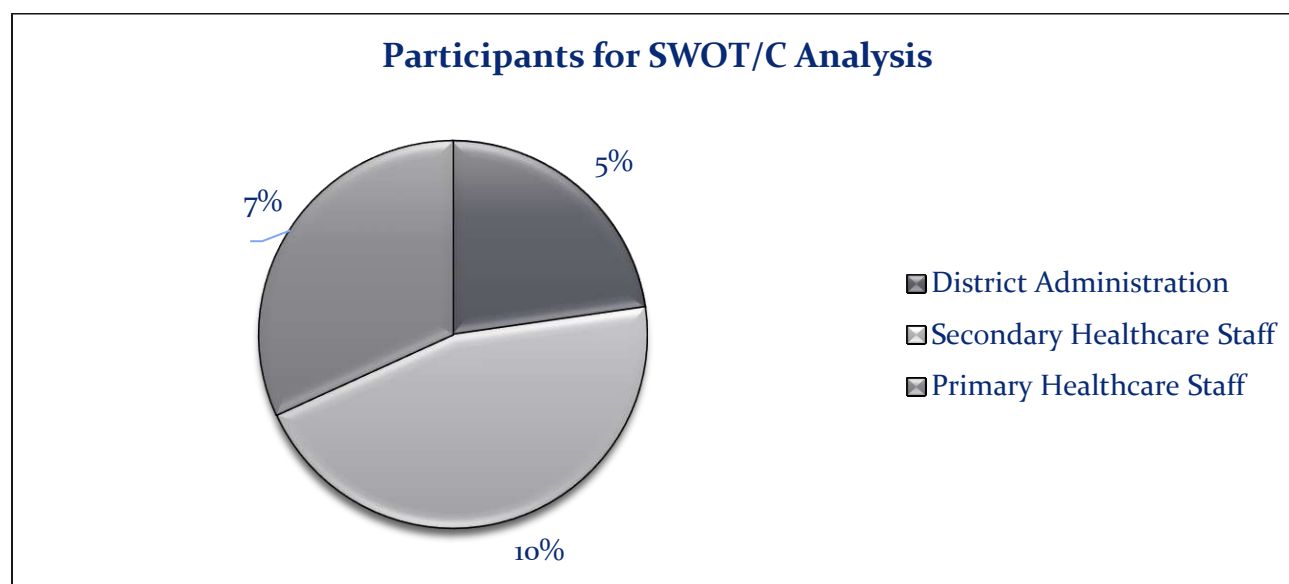


Figure 9: Participants for SWOT/C Analysis

Table 6: SWOC results for consultation on PHC

Primary Healthcare (PHC) Facilities - SWOC results	
<p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> • Compliance with Minimum Service Delivery Standards (MSDS) • Less number of over-crowded facilities • Equipment are mostly functional • Some facilities are operational 24/7 for emergency and gynae 	<p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> • Non-functional and dangerous buildings of residential areas • Dispensaries (recently transferred from LG Department to P&SHD) are lacking in facilities. • Poor water supply in some areas of Khushab • Missing equipment in some of the facilities
<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> • Upgrading some facilities to 24/7 level for emergency by provision of staff • Some upgradation schemes are already in progress • Integrations with healthcare system at upper levels (by clustering of RHC with BHUs) • There is a lot of unused space to expand the facility 	<p style="text-align: center;">Challenges</p> <ul style="list-style-type: none"> • Deteriorating conditions of public facilities infrastructure as compared to private • Because of weak referral system, patients are overcrowding secondary or tertiary care • Weak boundary walls is a security hazard • Lack of Maintenance & Repair (M&R) funding • Quackery implications

Table 7: SWOC results for consultation on Secondary Health facilities

Secondary Health Facilities - SWOC results	
<p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> • Good condition • Equipment is mostly functional • Ambulance 1122 stationed at some of the facilities • Overall infrastructure / hygiene condition is better in Bhakkar than Mianwali 	<p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> • Vacant posts of medical staff • Non-functional and dangerous buildings of residential areas • Non-functional incinerators at DHQ Bhakker affecting waste management
<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> • Upgrading some facilities to 24/7 level for emergency by provision of staff • Some upgradation schemes are already in progress • Integrations with healthcare system at upper levels (by clustering of RHC with BHUs) • There is a lot of unused space to expand the facility 	<p style="text-align: center;">Challenges</p> <ul style="list-style-type: none"> • Deteriorating conditions of public facilities infrastructure as compared to private • Because of weak referral system, patients are overcrowding secondary or tertiary care • Weak boundary walls is a security hazard • Lack of Maintenance & Repair (M&R) funding • Quackery implications

Table 8: SWOC results for consultation on HRH

Human Resource for Health (HRH) – SWOC results	
<p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> • Multi-tiered administrative staff at provincial, divisional, district and tehsil level 	<p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> • Vacant posts of medical staff • Non-functional and dangerous buildings of residential areas • DHA Sargodha office is located in deteriorating building in DHQ Sargodha
<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> • Some upgradation schemes are already in • Improvement of residence building and construction of day care center can support in retention of doctors • Capacity building and trainings for Health Staff to meet the modern-day requirements (infection control training, waste management training, training in public & patient dealing etc.) 	<p style="text-align: center;">Challenges</p> <ul style="list-style-type: none"> • Doctors prefer to transfer to urban areas, so local staff should be hired

Table 9 SWOC results for consultation on HMIS

Health Information Management System (HIMS) - SWOC results	
<p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> • Availability of DHIS dashboard for monitoring of primary facilities • Availability of digital Hospital Waste Management System for secondary facilities • Improved access to information 	<p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> • Inadequate M&E Criteria of scoring CEO/DHA performance. It is much focused on infrastructure and functioning of equipment and medicine stock instead of quality • MIS does not maintain individual clients records or household data
<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> • The province wide network of LHWs / LHVs can be used to maintain a family / household data, which must be updated periodically by childbirth, deliveries, mortality etc • An ongoing project of digitalization of DHQ Mianwali in collaboration with SKMCH (Shaukat khanum hospital) to adopt EMR system can be introduced in other facilities 	<p style="text-align: center;">Challenges</p> <ul style="list-style-type: none"> • Digital attendance system is not functional due to the pandemic

2.2.5 GIS Mapping

The Sargodha division covers the northern central region of Punjab. District Health Authorities (DHA) of each district are responsible for the delivery of key health services to the people, through Hospitals, Rural Health Centres (RHC), Basic Health Units (BHU), and

Dispensaries, Sub-health (SH) Centers and Mother and Child Healthcare (MCH) Centers at urban and rural level. The total composition of facilities in each district is given below, along with their number of beds:

Table 10: Health facilities in Sargodha Division

Facility Type		Facilities in Sargodha Division			
		Sargodha	Mianwali	Khushab	Bhakker
Hospital	No.	18	5	6	6
	Beds	1507	473	415	616
RHCs	No.	31	22	33	29
	Beds	0	0	0	5
BHUs	No.	14	10	5	5
	Beds	280	200	100	117
Dispensaries	No.	136	42	44	40
	Beds	272	84	88	80
SH Centers	No.	0	0	0	13
	Beds	0	0	0	0
MCH Centers	No.	8	6	7	2
	Beds	0	0	0	0

Source: Provincial Development Statistics (PDS) 2020

The geo-tagged locations of these health facilities are spatially mapped for further analysis. Assessment of spatial distribution along with population distribution will be quite helpful to recognize the uncovered areas. The current model of Punjab health system includes at least one BHU at each UC, while RHC is established on cluster of BHUs. Moreover, one DHQ is established at each district and one THQ at each tehsil. The maps below show that Sargodha having the highest population distribution has the highest number of health facilities. It can also be seen that Bhakkar has a large part of Thal desert with low population distribution and a smaller number of health facilities. Factors such as geographic spread,

low population density, limited infrastructure and higher costs for delivering rural and remote health care create challenges for healthcare system. With increasing population of the region, there is increasing amount of pressure on existing health infrastructure network. The maps also identify the uncovered areas in the region, thus highlighting the inaccessibility of health care services in the region. In Mianwali and Bhakkar district, it can be seen that the area with high population density is not covered with any health facility, thus new facilities can be proposed here to increase the service access.

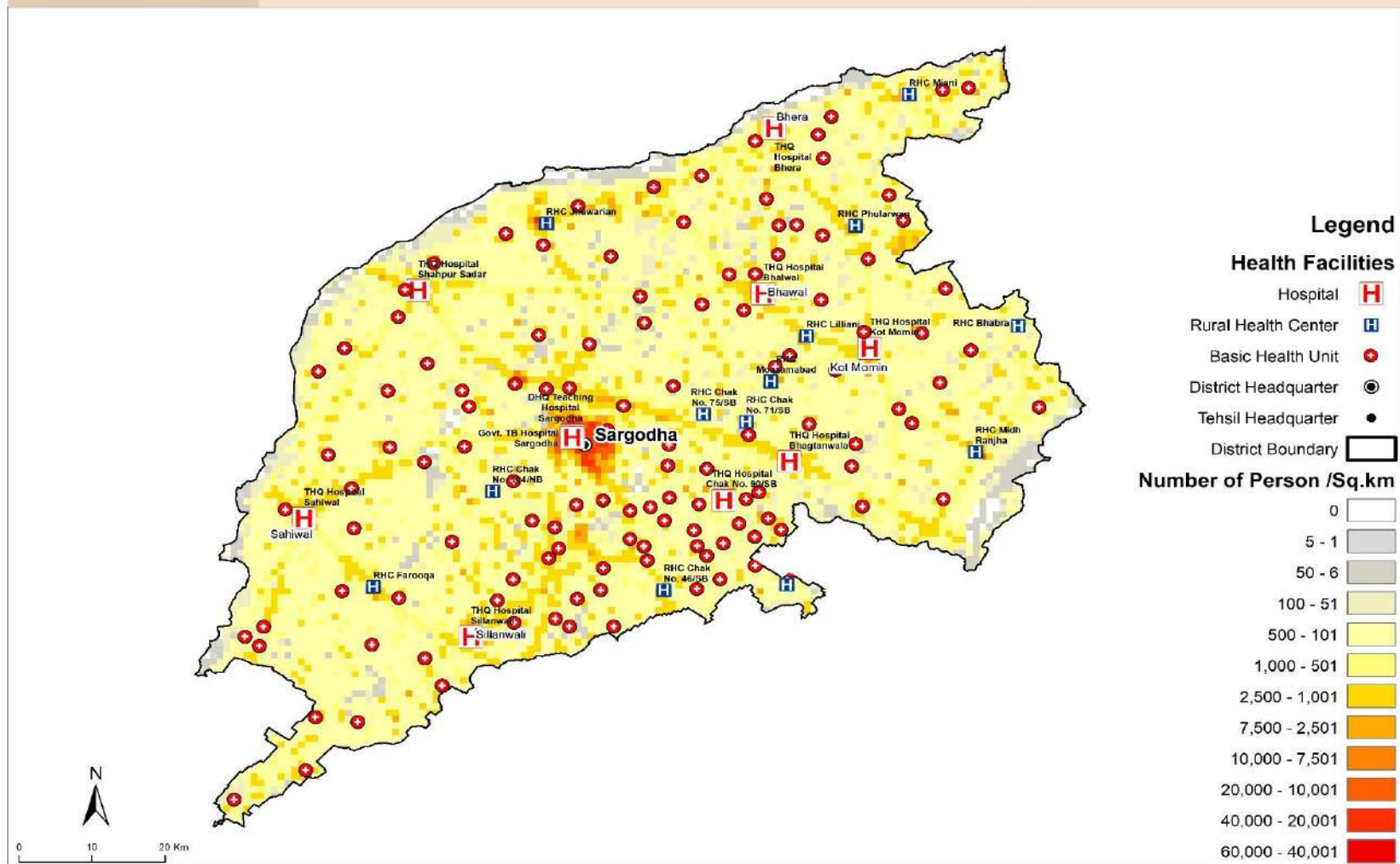


Figure 10: Spatial Distribution Health Facilities in Sargodha district

Source: The Urban Unit database

Health Facilities: District Mianwali

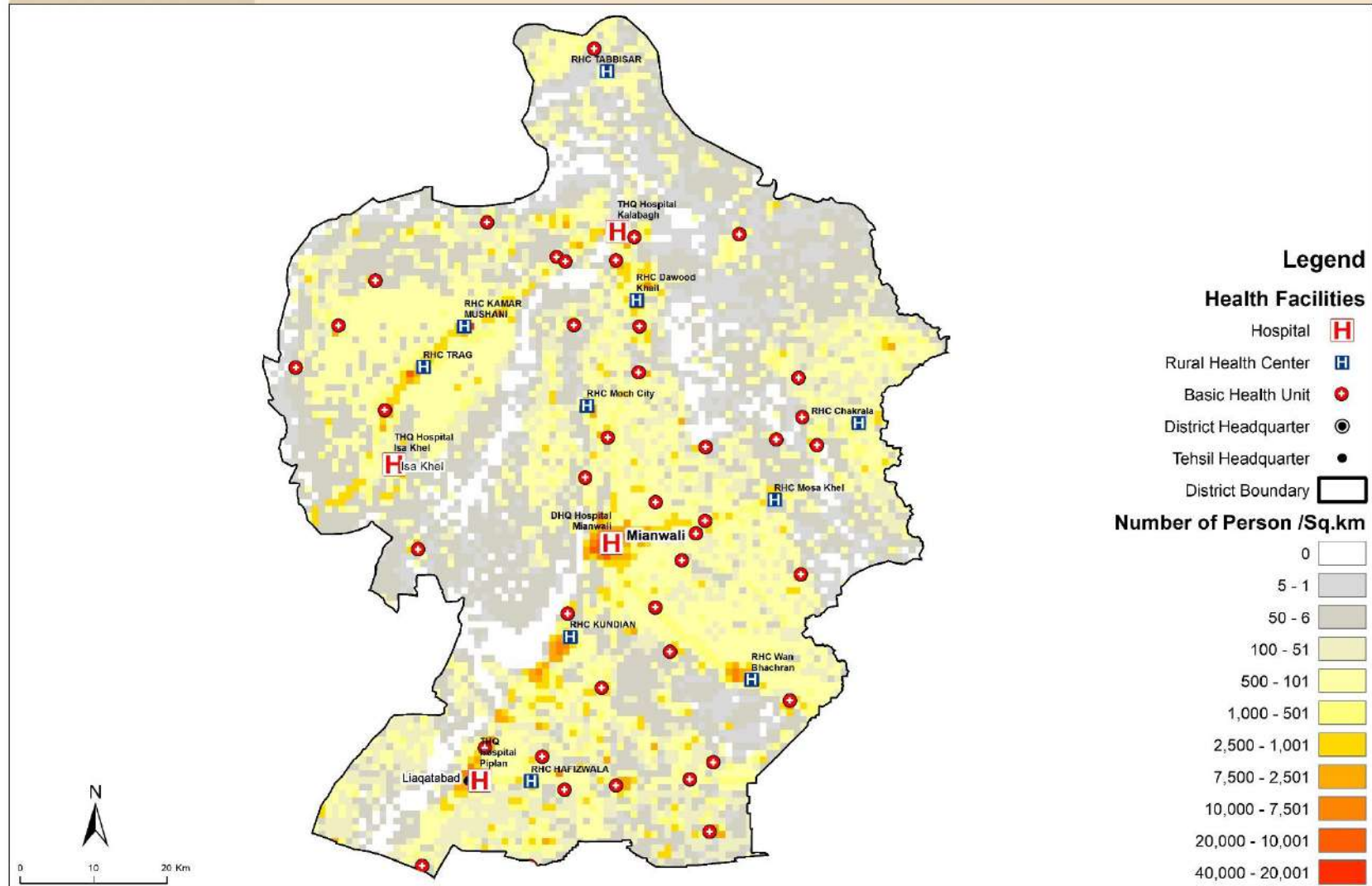


Figure 11: Spatial Distribution Health Facilities in Mianwali district

Source: The Urban Unit database

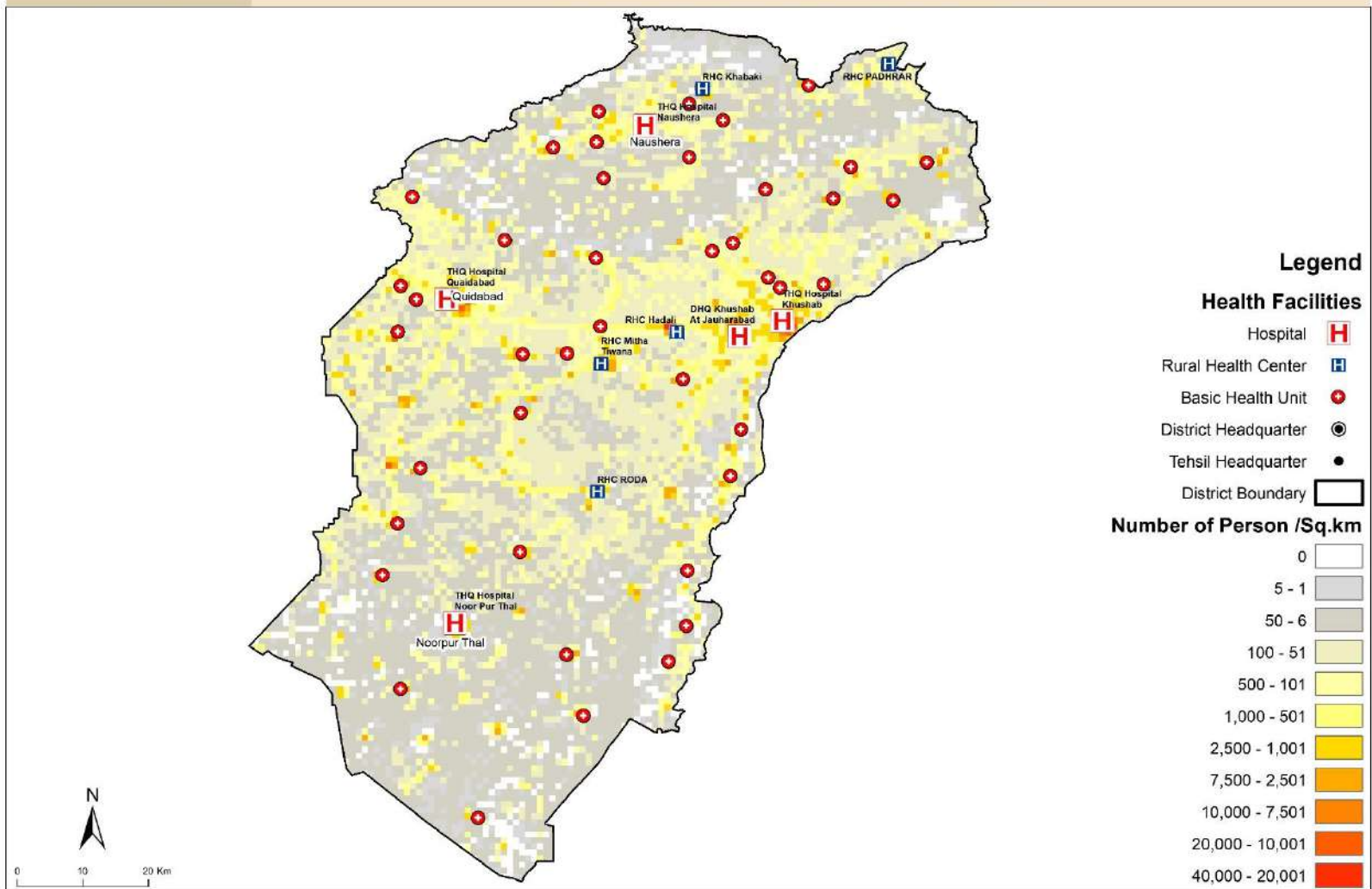


Figure 12: Spatial Distribution Health Facilities in Khushab district

Source: The Urban Unit database

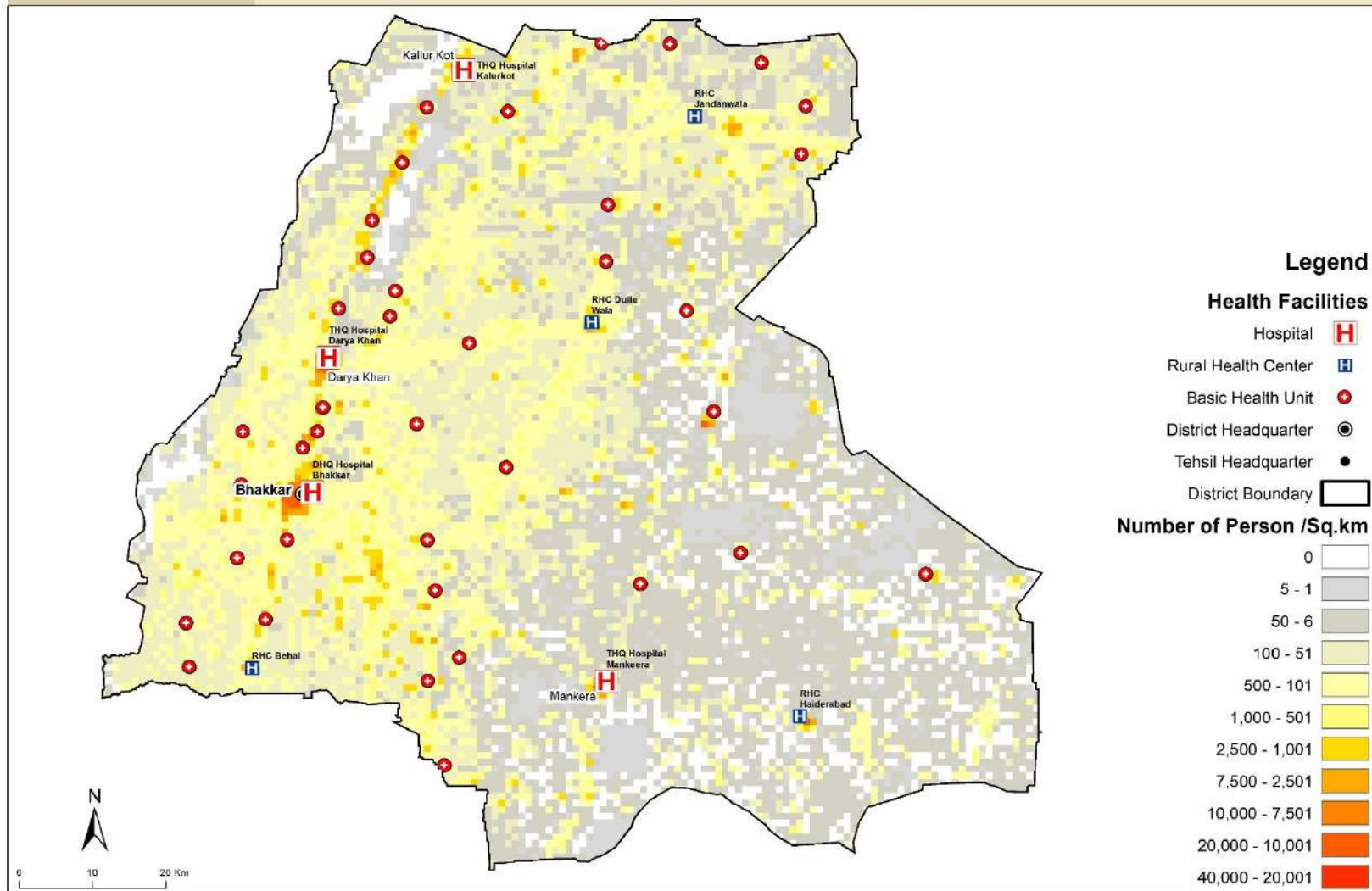


Figure 13: Spatial Distribution Health Facilities in Bhakker district

Source: The Urban Unit database

Chapter 3: Gaps Identification

The Health Sector Plan will highlight the situational analysis of the health system in the region and will identify the lagging areas which needs to be catered to.

3.1 Challenges and Constraints

3.1.1 Poor progress against SDGs

Health is a critical element in human development and has a significant impact on social progress. Investing in the health of a society is essential to enhance the productivity of workforce by increasing their physical capabilities, which include strength and endurance. Moreover, provision of inclusive, affordable and quality healthcare is an important measure of the quality of life. Presently, the Sargodha region suffers from low performance on the major health indicators

like infant mortality rates, antenatal care, number of doctors etc. The overall progress of the Sargodha Division is very poor against the major Sustainable Development Goals (SDGs) indicators related to health. It can be seen from the following figure that high rate of under-five mortality of the division i.e., 69 lives per 1000 births, is very far away from SGD target 2030 of 25 lives per 1000 births. Similar is the case for other indicators.



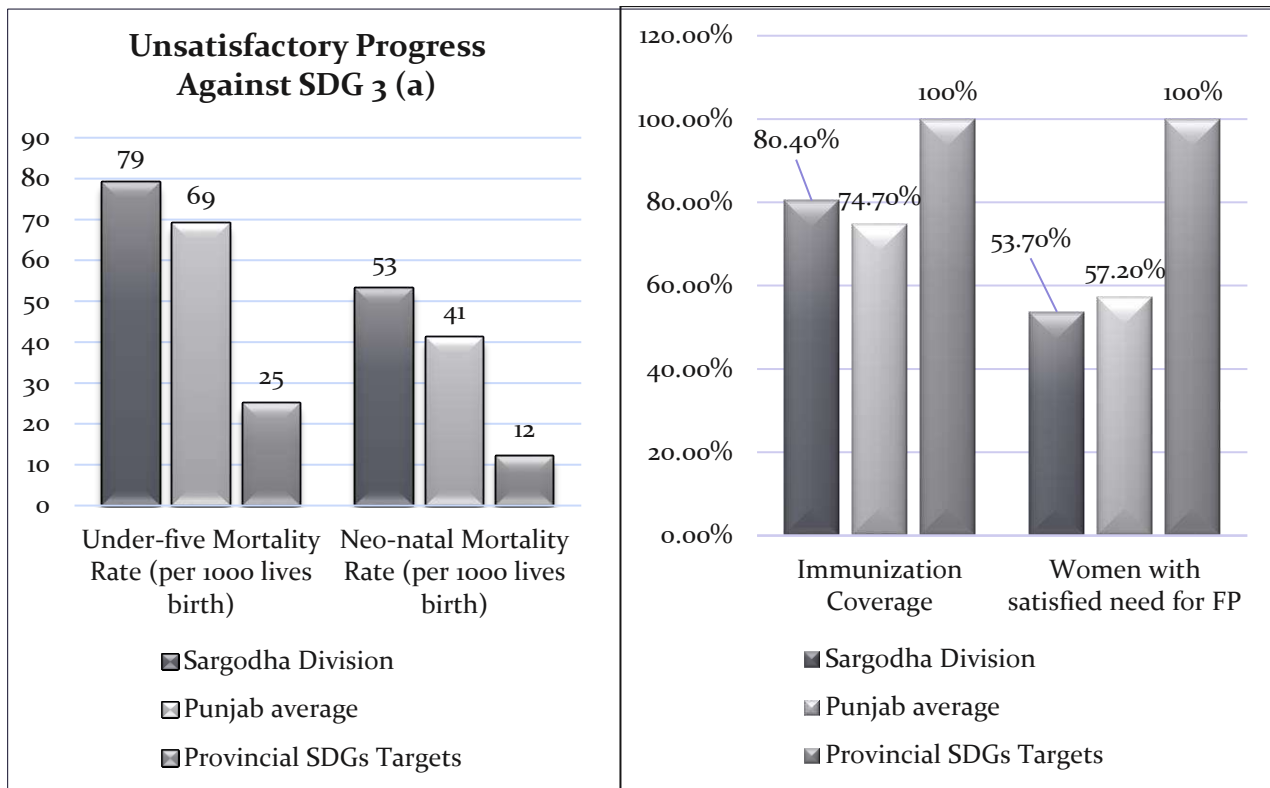


Figure 14(a)&(b): Sargodha Division’s progress against Punjab average and SDG targets 2030 i.e. Good Health & Wellbeing

Source: MICS 2017-18

For the attainment of SDG 2 to ensure zero hunger, the division progress is highlighted in the next figure, which shows that it suffers from high multi-dimensional poverty, food security and stunting prevalence.

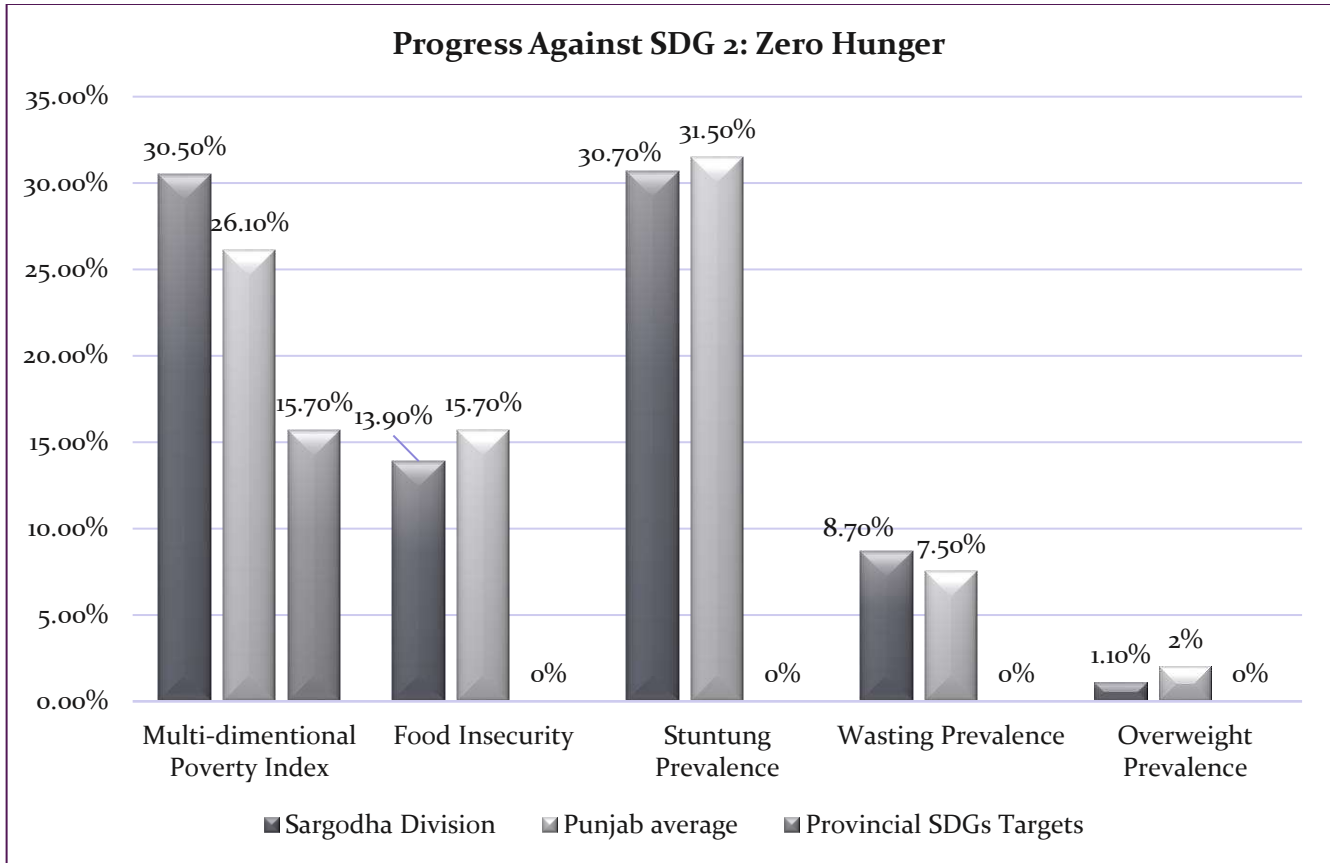


Figure 15: Bahawalpur Division’s progress against Punjab average and SDG targets 2030 i.e. Zero Hunger

Source: MICS 2017-18

3.1.2 Low Universal Health Coverage (UHC)

Pakistan is focused on achieving Universal Health Coverage (UHC) for all citizens by 2030 with a vision that everybody should have access to affordable and quality essential health services in the country. As defined by World Bank (WB) and World Health Organization (WHO), four groups for UHC monitoring, which are service capacity and access, reproductive, maternal, newborn, child and adolescent health and nutrition, non-communicable diseases and infectious diseases.



Universal Health Coverage is the main outcome of health-related SDGs and is measured with two targets, one for coverage of essential service delivery (3.8.1) and other for financial protection

(3.8.2). As per UHC Service Coverage Index⁵, Sargodha is performing well as compared to other districts, however only half of the population in Sargodha has access to essential health services/ universal health coverage, which is far from the global UHC Service Coverage Index target of 80+ by 2030. Mianwali and Bhakkar are worst performing districts.

Table 11: District-level UHC Service Coverage Index 2021

	Sargodha	Khushab	Mianwali	Bhakkar
UHC Service Coverage Index 2021	54.17	50.38	48.21	46.54
Ranking in Punjab	6 th	13 th	25 th	30 th



Source: Pakistan 2021 Monitoring Report Universal Health Coverage

3.1.3 Accessibility and quality of health facilities

There is a need to increase the service delivery in geographically poorer areas, to mitigate incidence of poverty. One of the major challenges faced by the region is that infrastructure is incomplete and equipment are missing or non-functional. The existing capacity of health facility is demonstrated by beds to population ratio, which is a WHO indicator. The figure below shows required beds in some of the health facilities of the region, which is calculated by dividing the number of beds in the facility by its catchment population.

⁵ Pakistan: 2021 Monitoring Report Universal Health Coverage

Table 12: District skilled health professional per 1000 population and beds per 1000 population

Indicators	Skilled health professional per 1000 population	Beds per 1000 population
Minimum threshold	 4.45:1000	 1:1000
Province Average	0.39	0.54
Sargodha	0.35	0.56
Bhakkar	0.41	0.49
Khushab	0.48	0.54
Mianwali	0.40	0.44

Source: Estimated from DHIS Report 2019-20 and PDS 2019

Apart from this, following is are the proportion of missing infrastructure in health facilities of Sargodha. It can be seen that 40 to 60 percentage of the facilities need repairing. Moreover, many facilities have missing utilities such as public toilets, gas facilities, boundary walls, electricity and approach road.

Table 13: Proportion of facilities with missing infrastructure

District	Missing Infrastructure facilities						
	Hospital Building Need Repair / irreparable	Facility Having no source of water	Public Toilets (Not Available)	Gas Facility (Not available)	Hospital Having Damage Boundary wall	Hospital having no Electricity	Hospital having Katcha Road
Bhakkar	45%	3.5%	35%	74%	26%	2%	18%
Khushab	43%	4.1%	43%	80%	43%	2%	16%
Mianwali	48%	4.3%	64%	86%	24%	0%	13%
Sargodha	60%	4.3%	34%	80%	44%	5%	7%

Source: Extracted from DHIS dashboard 2022

3.1.4 Large number of vacant posts

Doctors to patient ratio is also low in the health facilities. Most of the health facilities are lacking the qualified human resources and many posts are vacant. As per the DHIS report 2019-20, the total number of skilled health professionals (midwives, nurses and physicians) in Bahawalpur division is 9775 covering a population of 8.2 million. Since less than half of the population is currently being covered, the existing capacity is too low against the minimum benchmark laid out by WHO, which is 5.9 skilled health professionals per 1000 population as the workforce requirement for ending preventable maternal deaths⁶. The figure below demonstrates the vacant posts in each district of Bahawalpur division. It can be seen that vacant post in Khushab and Sargodha district has increased over the period of time, instead of decreasing.

⁶ Punjab Health Sector Strategy 2019-2028

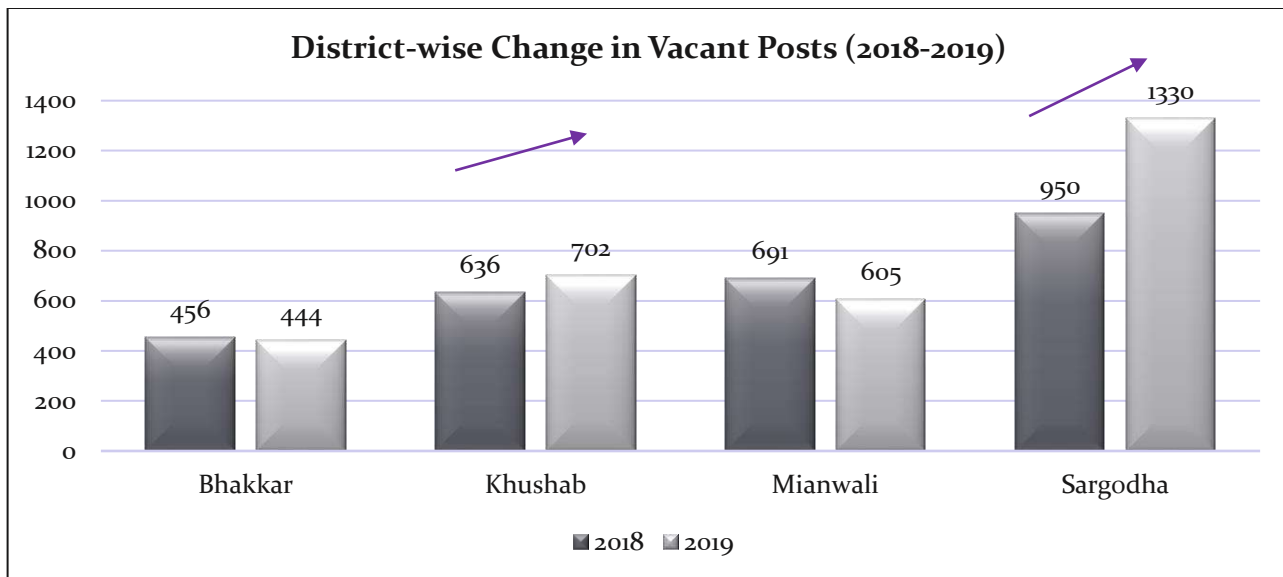


Figure 16: Vacant posts at each facility

Source: DHIS report 2018 & 2019-2

3.1.5 Low Mother and Child Healthcare (MCH) Indicators

Since the introduction of Millennium Development Goals (MDGs), it was identified that almost half of under-five deaths were in the neonatal period, thus led to focus on Maternal, Newborn, and Child Health (MNCH) and Reproductive, Maternal, Newborn, and Child Health + Adolescent health (RMNCH+A) to underline the crucial importance of reproductive health. However, mother and child healthcare indicators in Sargodha division are worst off, since 70.5% of the deliveries in Sargodha division were attended by a skilled person which is less than SDG 2030 target of 90%.

Table 14: WHO-recommended 4 ANC visits and birth attended by skilled personals

Indicators	WHO-recommended 4 Antenatal visits	Births Attended by Skilled Personals
Minimum threshold		

	100%	100%
Province Average	48.0	64.7
Sargodha	49.3	70
Bhakkar	34.3	52.7
Khushab	38.7	68.7
Mianwali	53.6	68.5

Source: MICS 2017-18

3.1.6 Low level of facility utilization and public satisfaction level

The overall health situation in the region has improved, however significant challenges still persist which creates inequality and disparities in provision of health facilities especially for the marginalized population. To assess the existing situation of the progress on health facilities, the following figure shows the change in year wise OPD percentage in primary, secondary and tertiary health care facilities of Sargodha division. High OPD attendance is an indication of facility utilization of the health services⁷. As per DHIS report 2019-20 and 2018, the overall OPD per capita in Sargodha district is seen to be decreasing from the year 2018 to 2020⁸, giving an indirect indication of low public trust on health services.

⁷ District Health Information System (DHIS) Report 2019-20

⁸ These are district level indicators, no Cholistan specific data is available

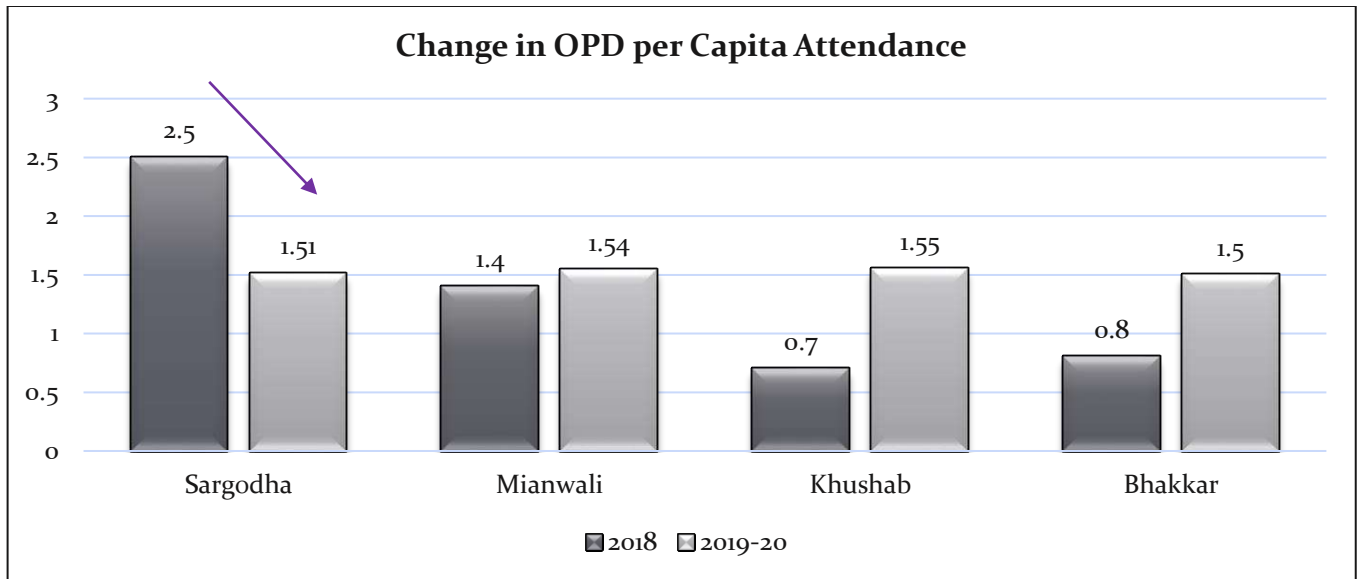


Figure 17: Change in average new cases per day

Source: DHIS 2019-20

Based on Household (HH) perception of the performance of BHUs in the Sargodha division, the following table shows the care seeking behavior during Acute Respiratory Infection (ARI), which is one of the top diseases in the region. More than half of the patients of ARI, reached out to private health facilities for advice and treatment as shown in the table below. While only a small proportion of respondents reported availing the facilities of public facilities which raises the question as to why citizens are not availing the public services. Moreover, HH satisfaction level by BHUs in Sargodha, Khushab and Bhakkar is low.

Table 15: HH satisfaction level of BHUs

Care seeking behavior during diarrhea - top disease					
		Sargodha	Mianwali	Khushab	Bhakkar
Advice or treatment was sought from	Public HF (%)	12.1	29.8	12.8	25.2
	Private HF (%)	69.8	43.2	59.4	53.5

No advice or treatment sought	14.2	12.3	17.6	19.0
Public Perception (in percent)				
HH satisfaction level by BHUs	48.81	62.02	36.17	42.42

Source: PSLM 2019-20 and MICS 2017-18

3.2 Spatial Mapping of Uncovered Areas

In this section, travel time analysis has been used to quantify populations' physical accessibility to healthcare infrastructure and identify the areas which are covered and not covered by the health services. The travel time analysis is displayed in the maps below.

3.2.1 Uncovered areas in Sargodha district

From figure 18 to 21, health facilities (BHU, RHC, THQ and DHQ) accessibility is shown as green areas. Sargodha region is adequately covered by BHU except for few areas, which are more than 10 minutes away from the nearest facilities, depicted by blue area. Similarly, region is covered by THQs, except from some areas in Sillianwali Tehsil, which is more than 30 minutes away. RHC and DHQ accessibility maps, particularly show that some of the areas are still inaccessible (more than 30 mins and even 45 mins away) from the nearest facilities. For instance, District Headquarter Hospital Sargodha is more than 40 to 60 minutes away from some areas of Bhera tehsil, Kot Momin tehsil and Sahiwal tehsil.

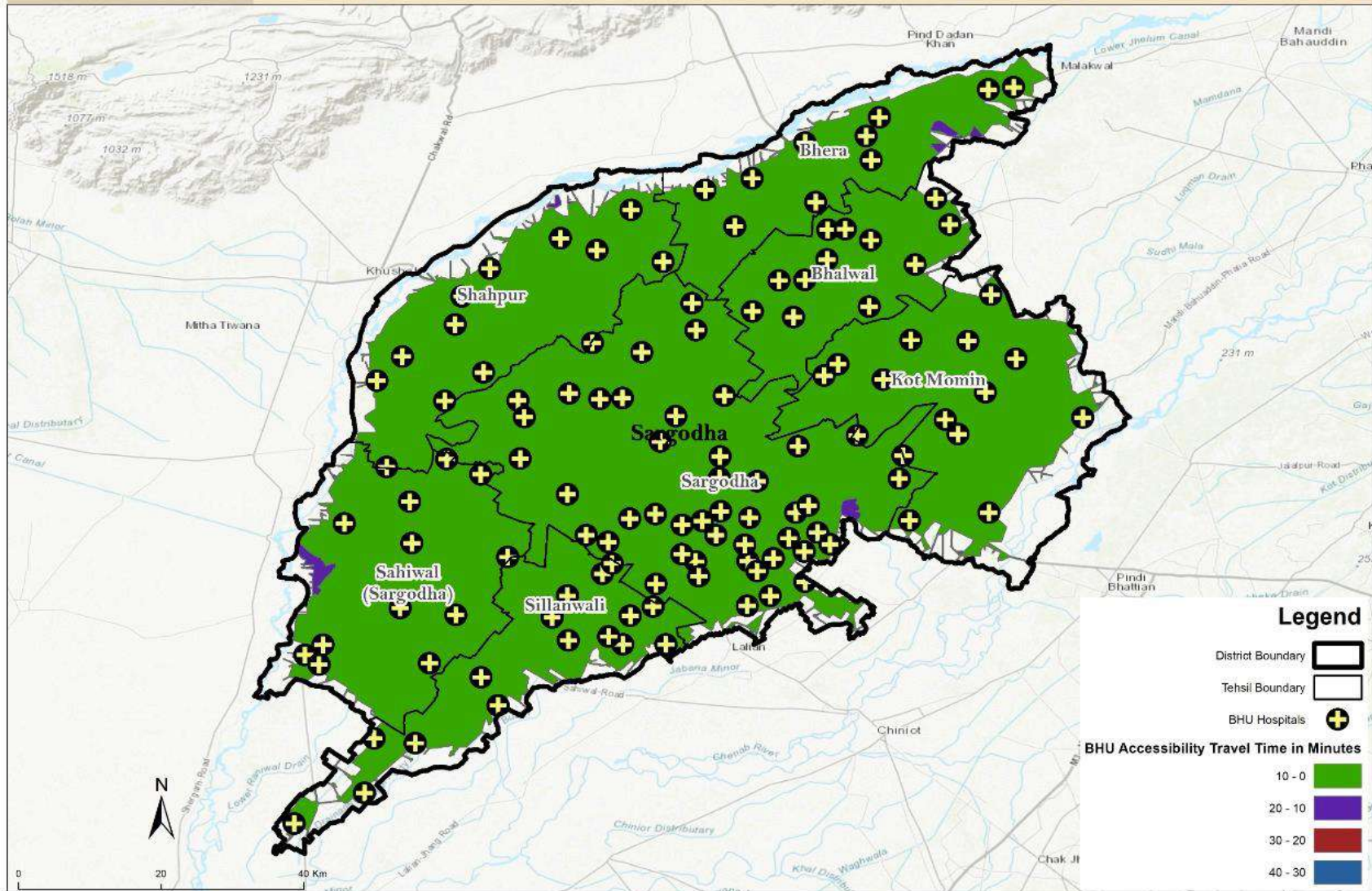


Figure 18: Uncovered areas – BHU

Map of Health Facilities of RHC Accessibility (Sargodha)

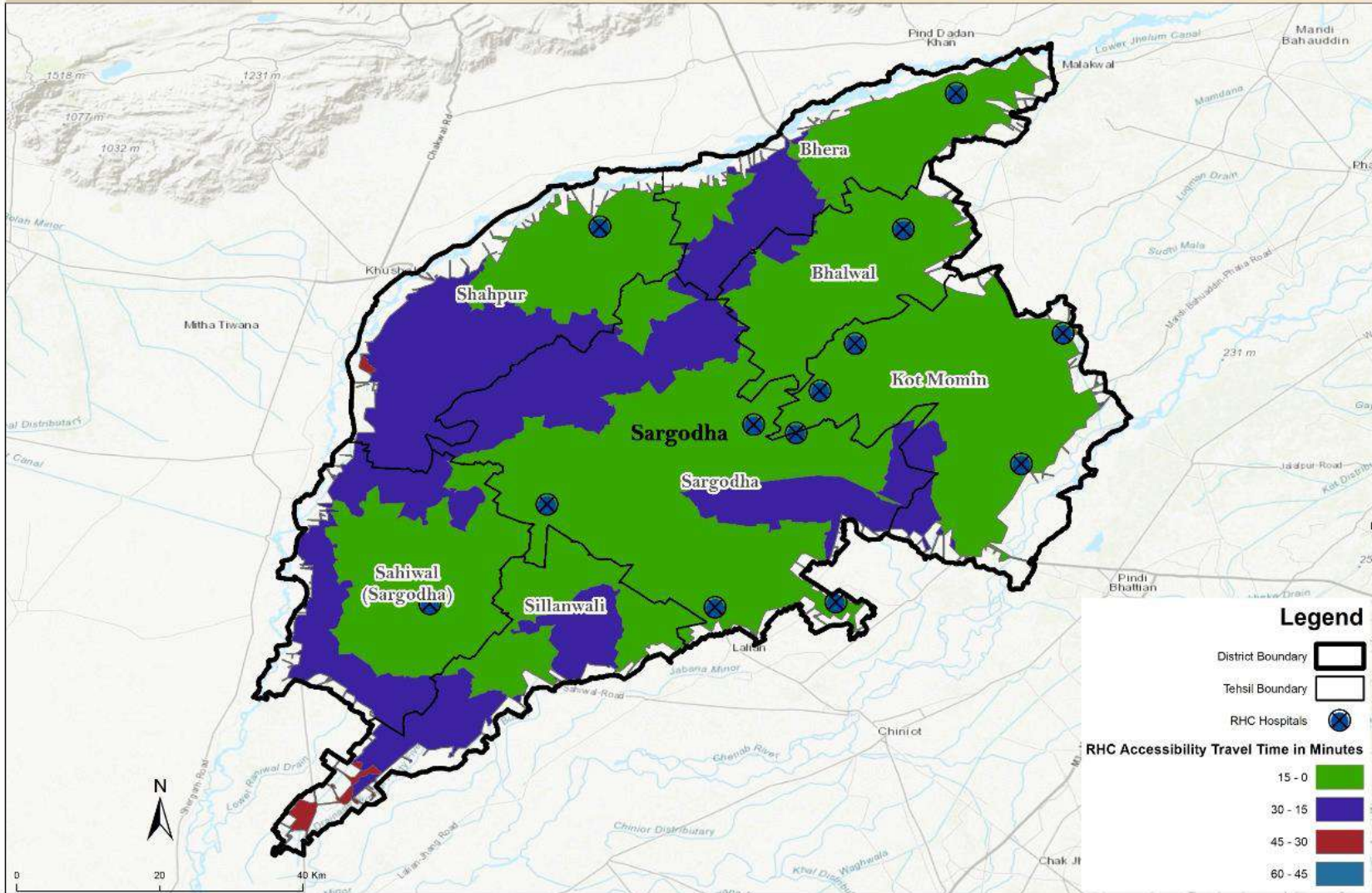


Figure 19: Uncovered areas – RHC

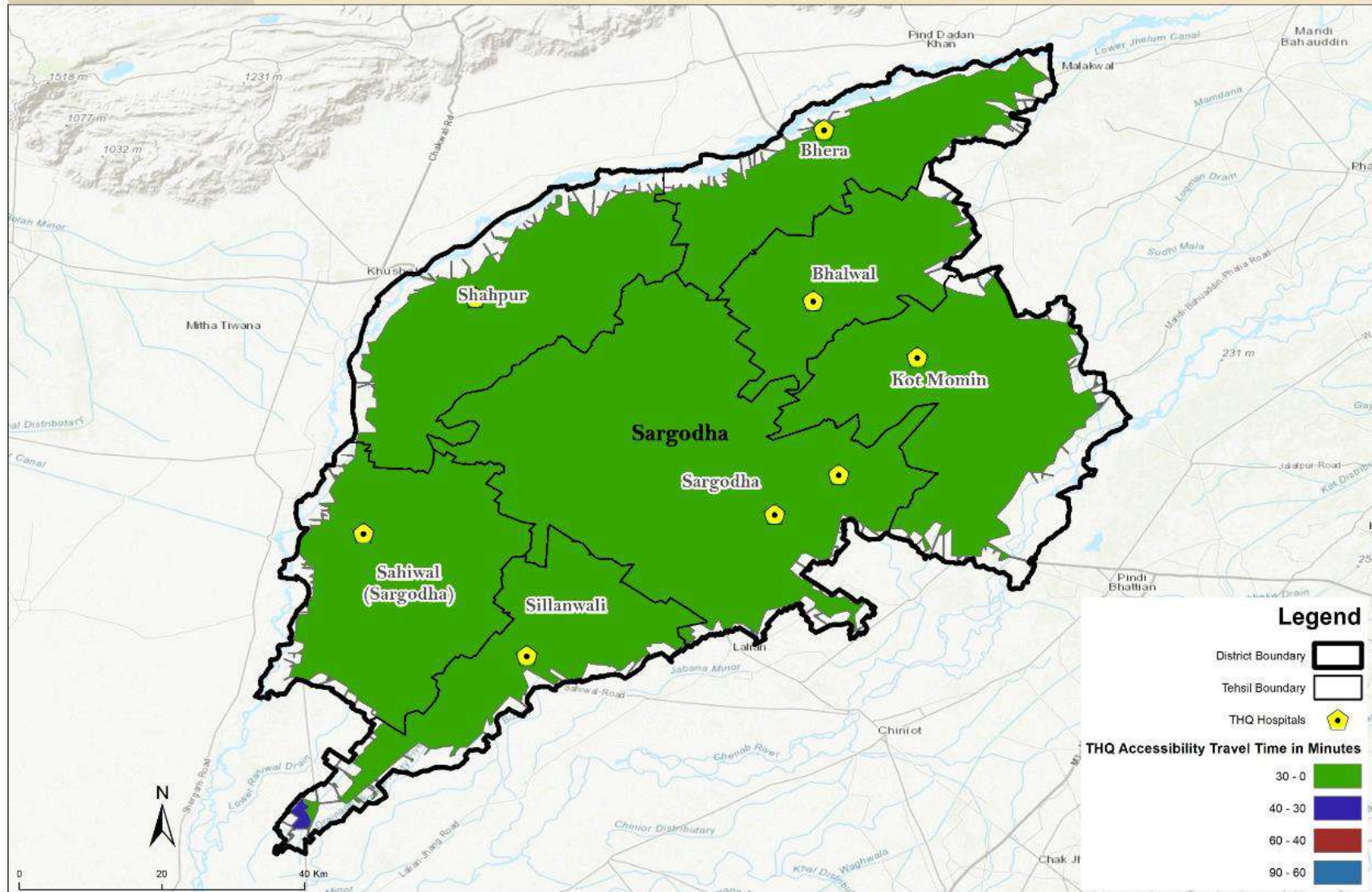


Figure 20: Uncovered areas - THQ

Map of Health Facilities of DHQ Accessibility (Sargodha)

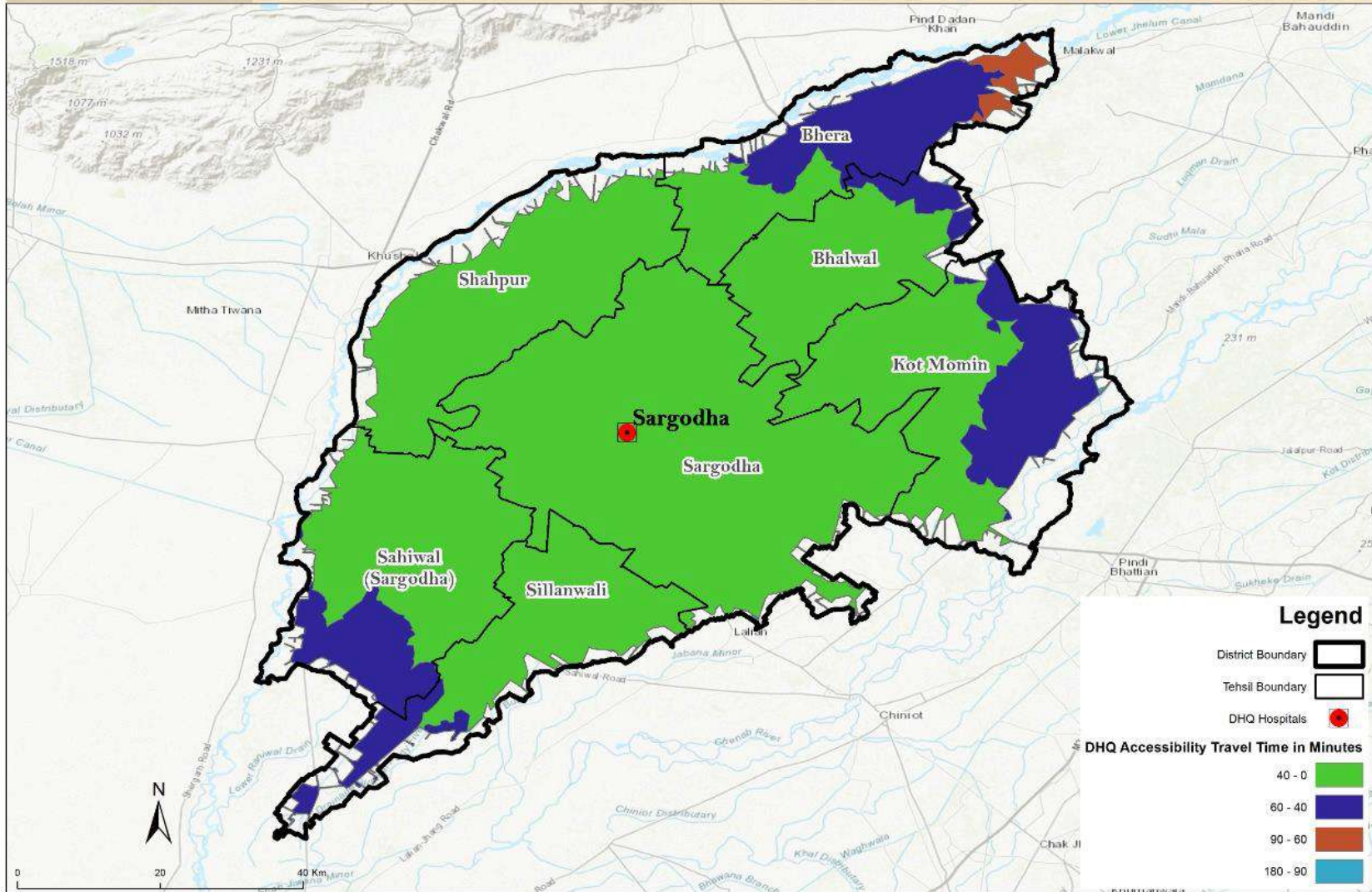


Figure 21: Uncovered areas - DHQ

3.2.2 Uncovered areas in Mianwali district

From figure 22 to 25, health facilities (BHU, RHC, THQ and DHQ) accessibility is shown as green areas. Geographically the area of Mianwali district includes the portion of Salt ranges and Indus River, which is depicted by the white area showing low road network in that area. When looking at the BHU accessibility, it can be seen that some of the areas of Mianwali and Isa Khel Tehsils are 10 to 20 minutes away from the nearest facilities. In case of RHC accessibility, large portion of Piplan tehsil is far from nearest RHCs, thus depriving the population from basic healthcare services. Moreover, there are three THQs covering the population of Mianwali district, and it can be seen that a large portion of Mianwali tehsil is far from nearest THQs. However, DHQ Khushab, which provides higher and specialized healthcare services, far away from Isa Khel tehsil (around 40 to 60 minutes away).

Map of Health Facilities of BHU Accessibility (Mianwali)

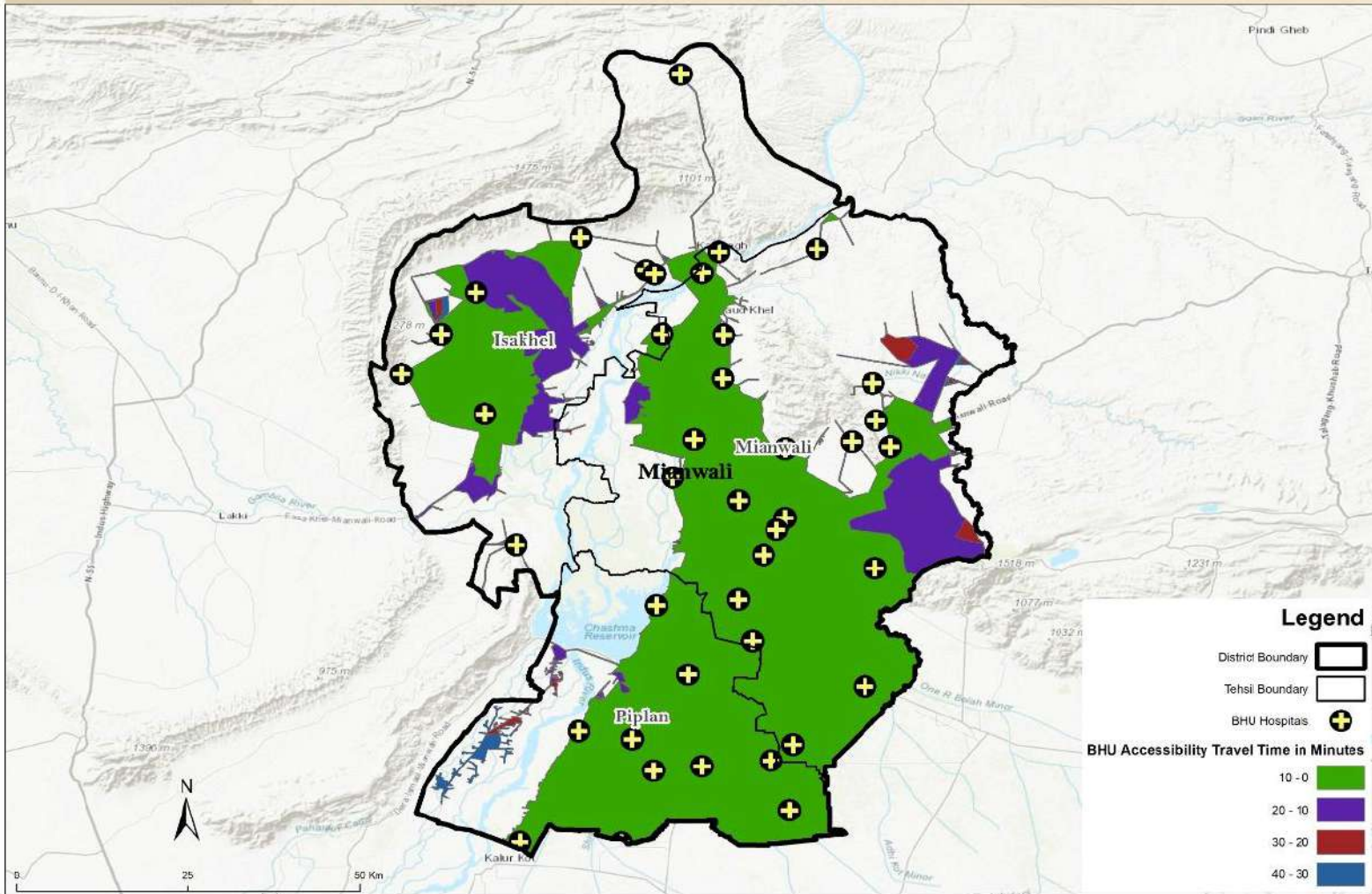


Figure 22: Uncovered areas - BHU

Map of Health Facilities of RHC Accessibility (Mianwali)

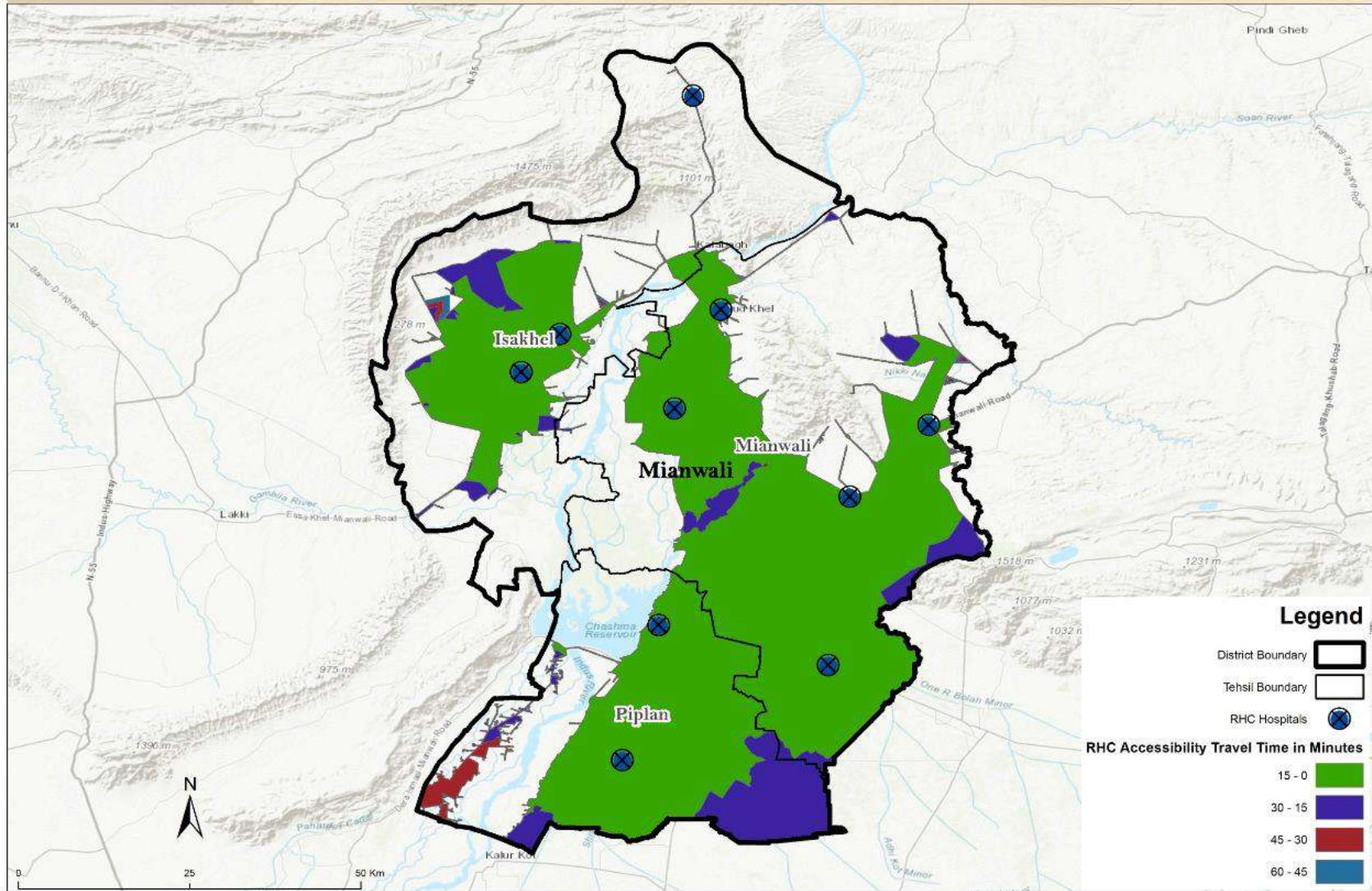


Figure 23: Uncovered areas - RHC

Map of Health Facilities of THQ Accessibility (Mianwali)

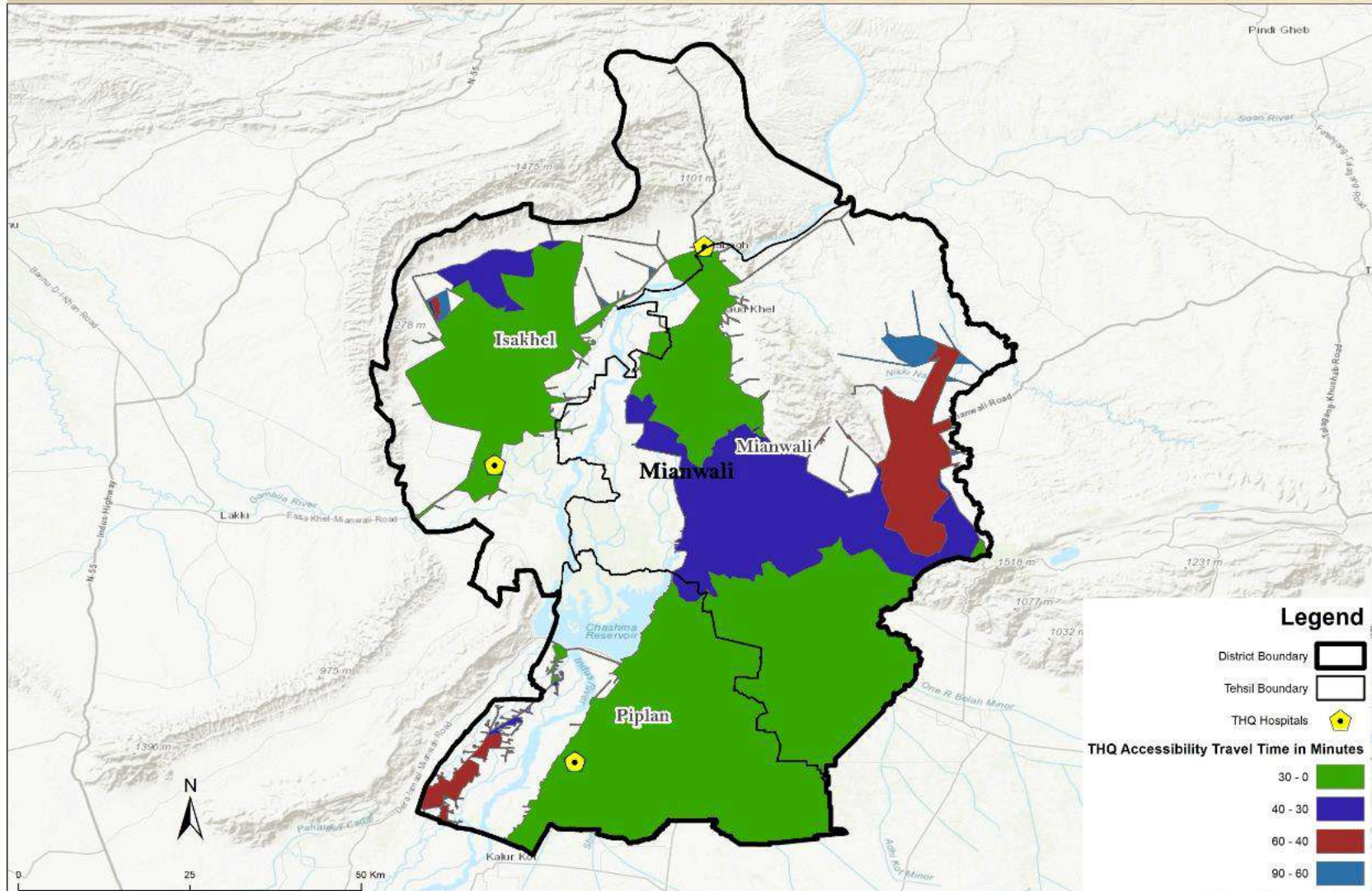


Figure 24: Uncovered areas - THQ

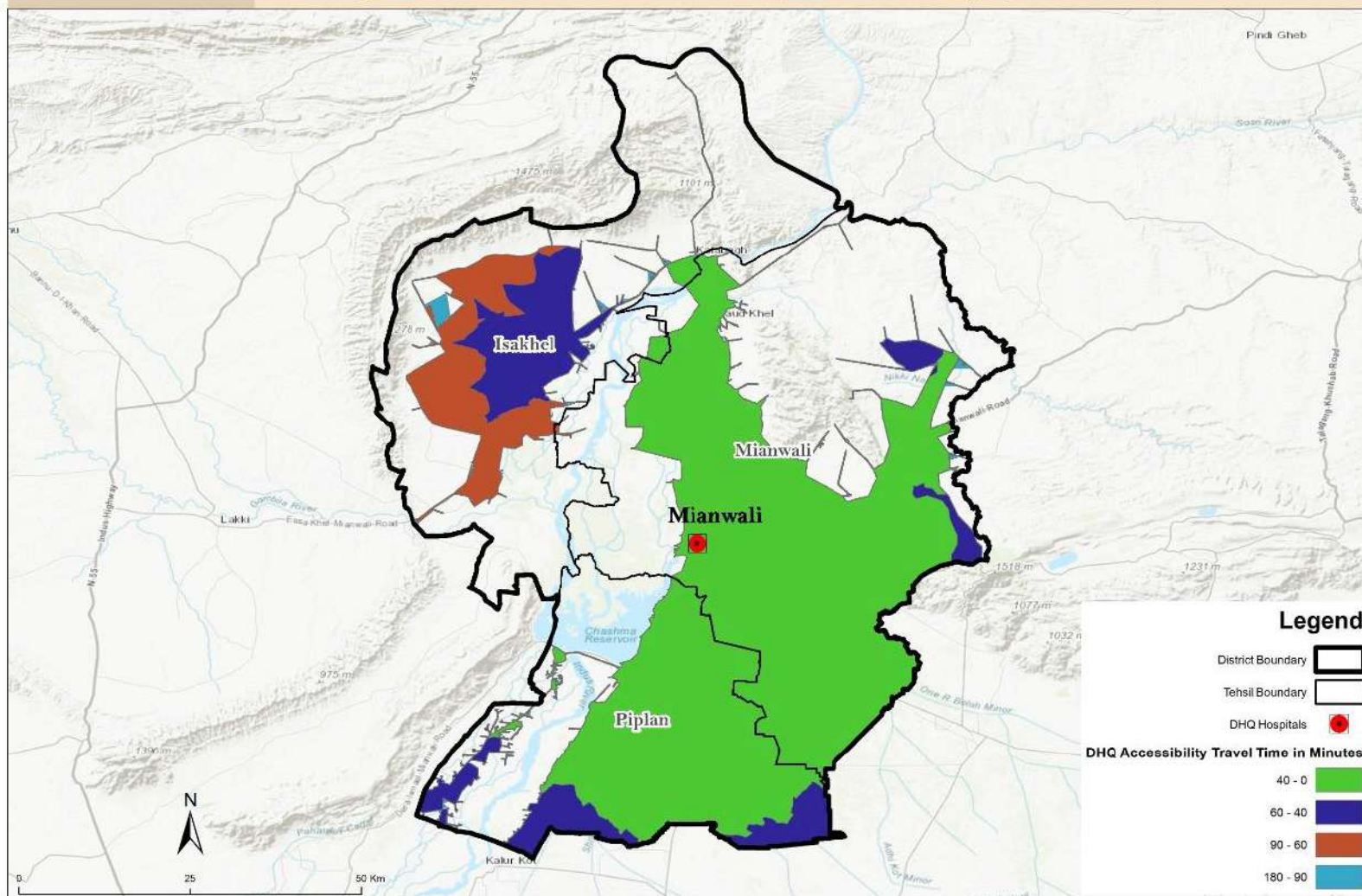


Figure 25: Uncovered areas - DHQ

3.2.3 Uncovered areas in Khushab district

From figure 16 to 19, health facilities (BHU, RHC, THQ and DHQ) accessibility is shown as green areas. Geographically the vast area of the Noorpur Thal tehsil which includes the Thal desert areas, is inaccessible from the existing network of health facilities, depriving the population from basic healthcare services. These maps, particularly RHC accessibility map, show that geographically the vast area of division is still inaccessible (more than 30 to 40 mins away) from the nearest RHC, since there are limited number of RHC in the area. Moreover, distribution of THQs in Khushab is adequate, similar to the Sargodha district, which is accessible to the population as depicted by the green area. However, DHQ Khushab, which provides more higher and specialized healthcare services, is catering to Quaidabad and Khushsab tehsils, while it is far away from Nowshera and Noorpur Thal tehsils.

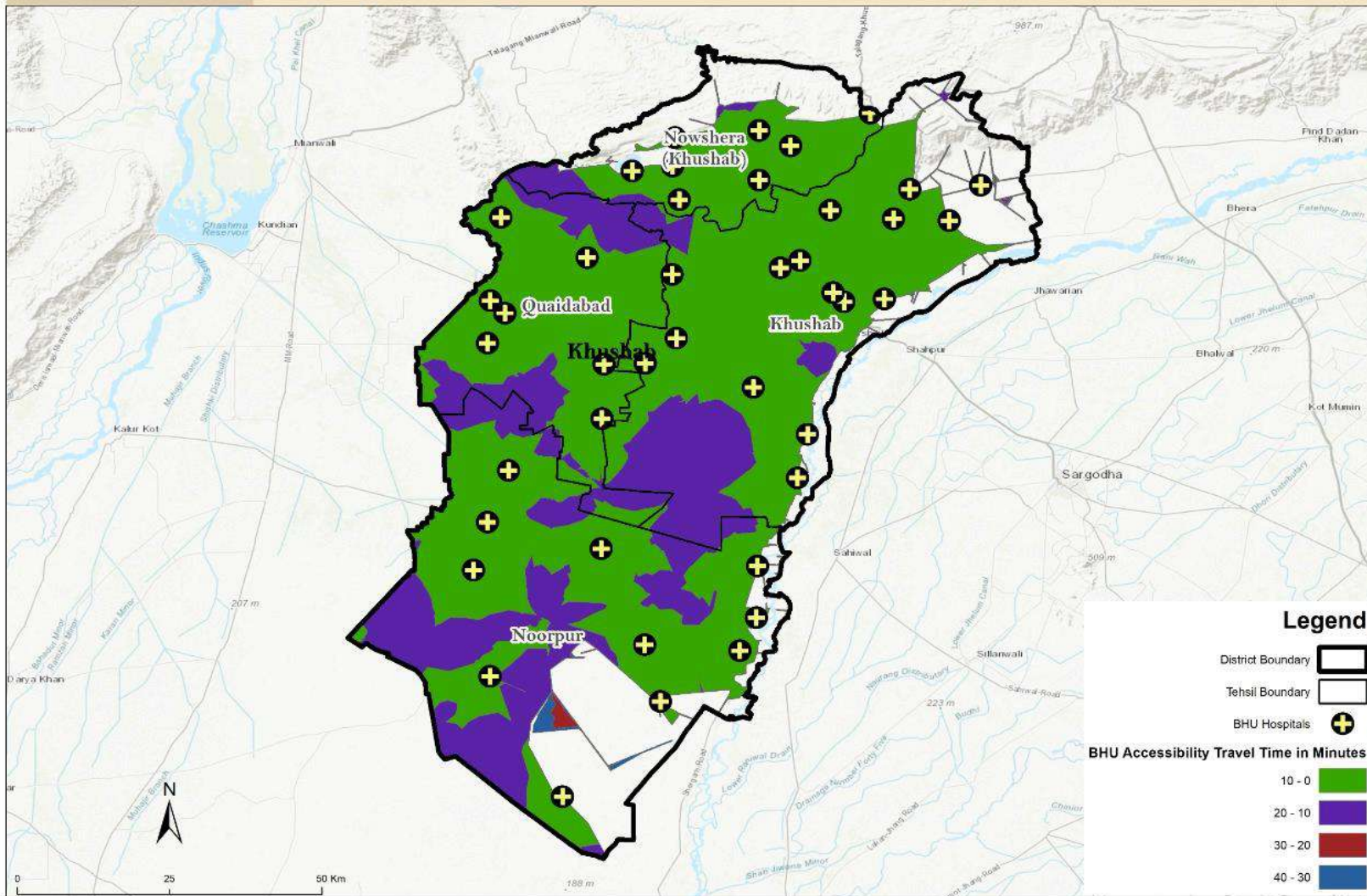


Figure 26: Uncovered areas - BHU

Map of Health Facilities of RHC Accessibility (Khushab)

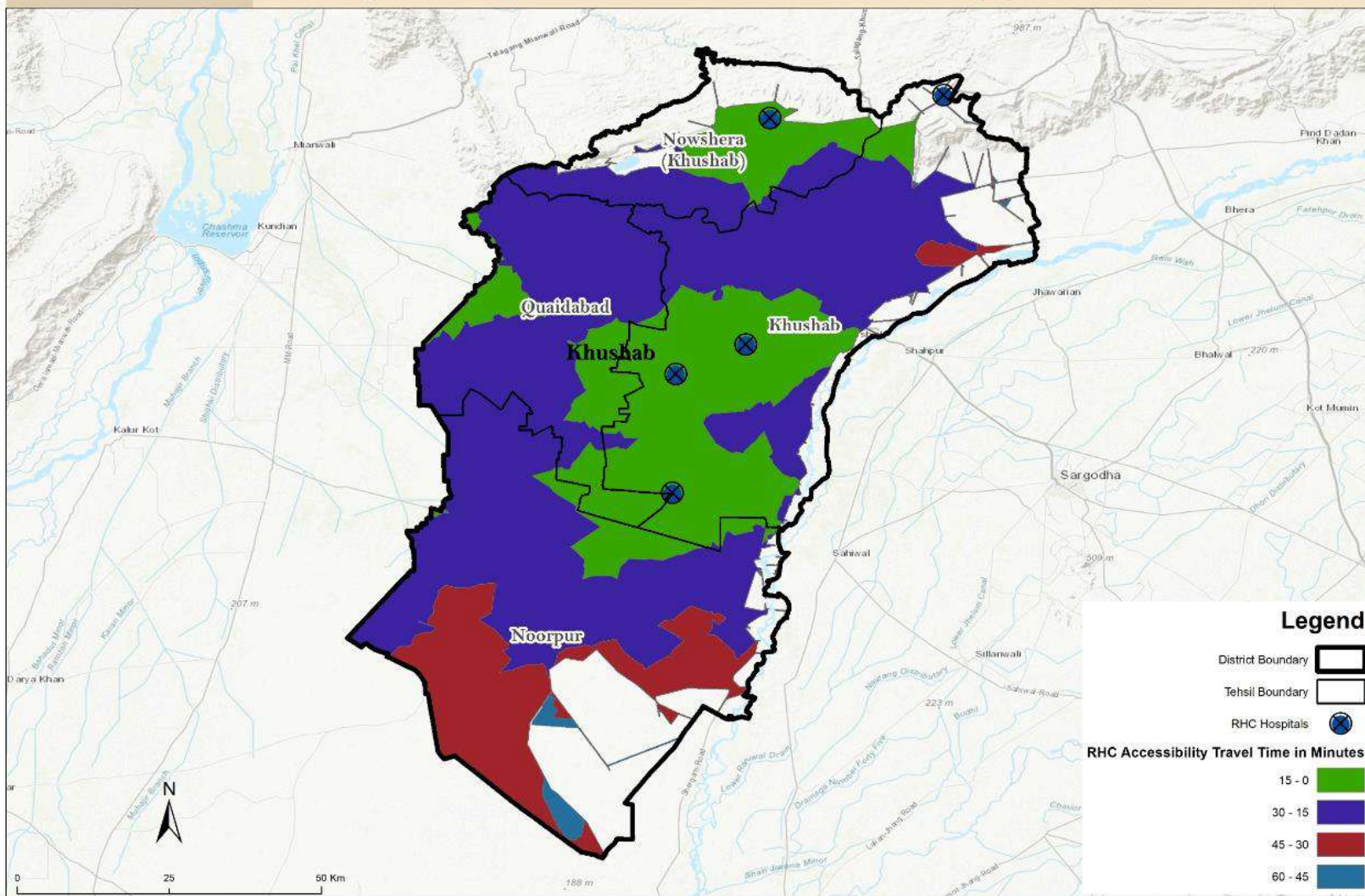


Figure 27: Uncovered areas - RHC

Map of Health Facilities of THQ Accessibility (Khushab)

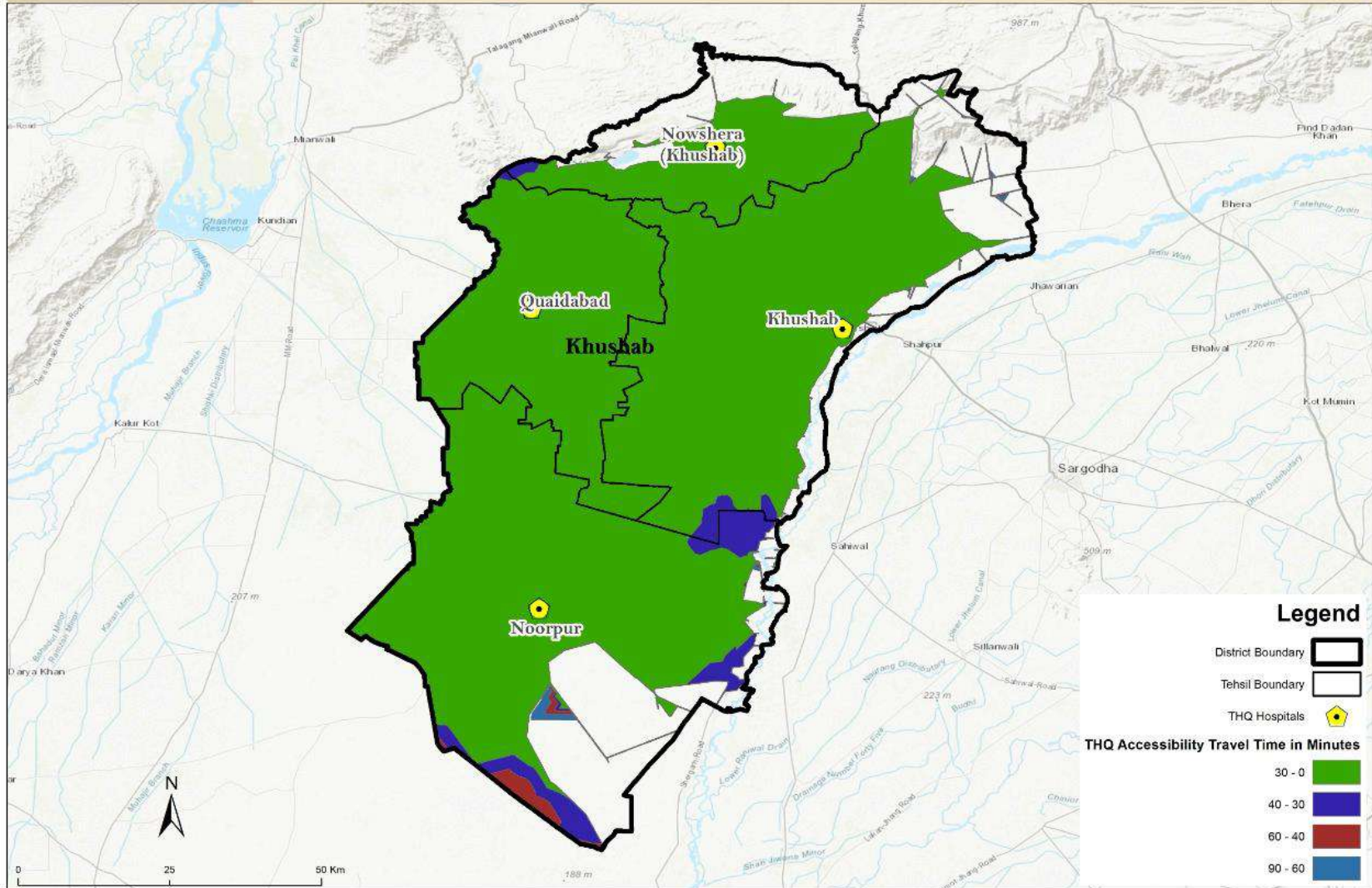


Figure 28: Uncovered areas - THQ

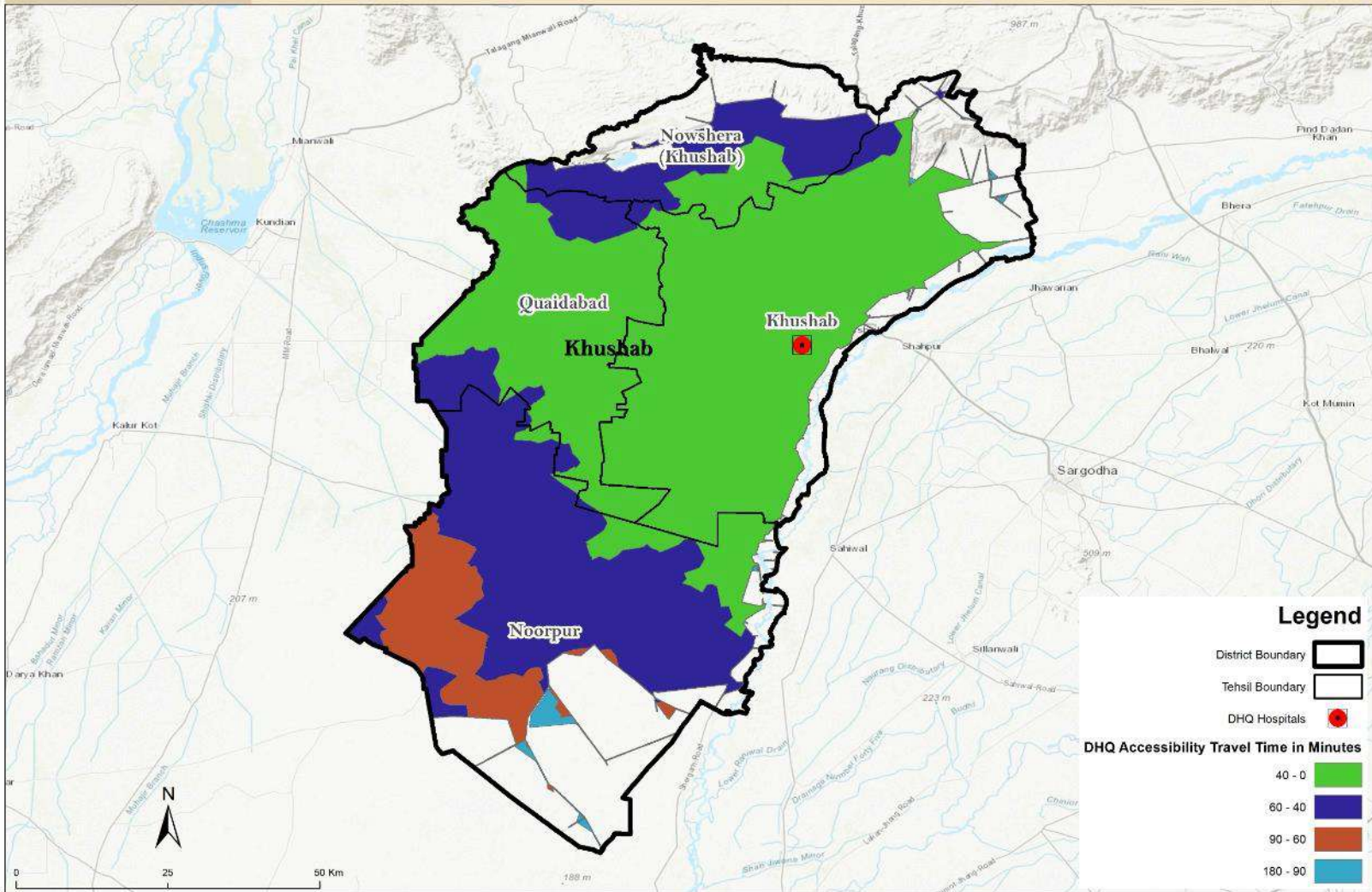


Figure 29: Uncovered areas - DHQ

3.2.4 Uncovered areas in Bhakkar district

From figure 28 to 30, health facilities (BHU, RHC, THQ and DHQ) accessibility is shown as green areas. Bhakkar district is mostly covered by Thal desert. The first figure shows the accessibility of BHUs in the region, showing that there are some areas which are more than 10 to 20 mins away from the existing facilities. Especially for the Mankera tehsil, where the south – east areas are more than 20 minutes away, making it inaccessible for the population to access the basic healthcare services. In case of RHC, the vast area of the district is inaccessible (more than 40 mins away) from the nearest health facility, highlighted by blue and maroon areas. Similarly, for THQs accessibility, the tehsils of Mankera and Darya Khan have lowest accessibility, with areas more than 30 to 40 minutes away. However, DHQ Bhakkar, which provides higher and specialized healthcare services, is catering to the Bhakkar and Darya Khan tehsil, while it is far away from Kallar Kot and Mankera tehsils.

Map of Health Facilities of BHU Accessibility (Bhakkar)

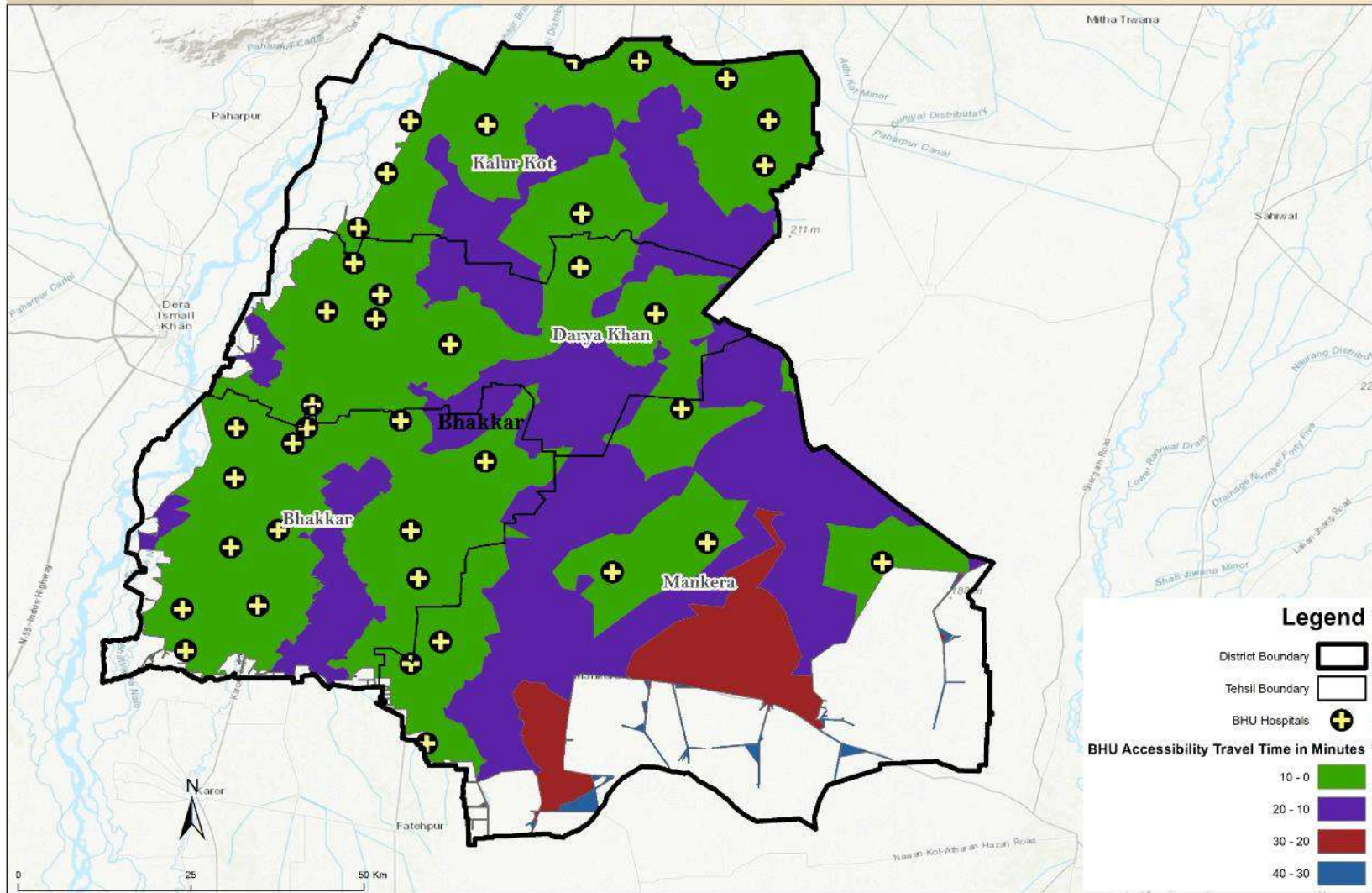


Figure 30: Uncovered areas – BHU

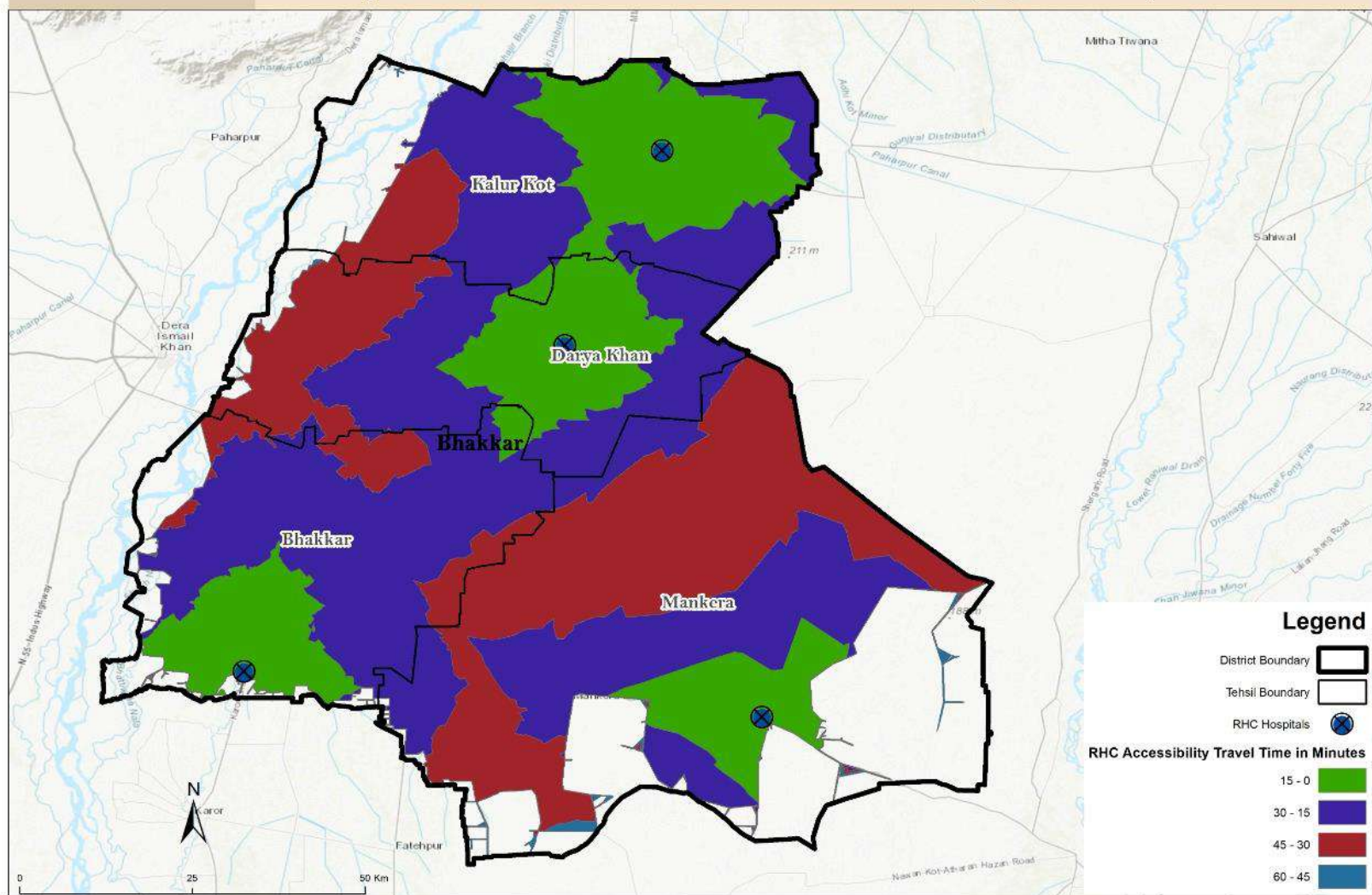


Figure 31: Uncovered areas - RHC

Map of Health Facilities of THQ Accessibility (Bhakkar)

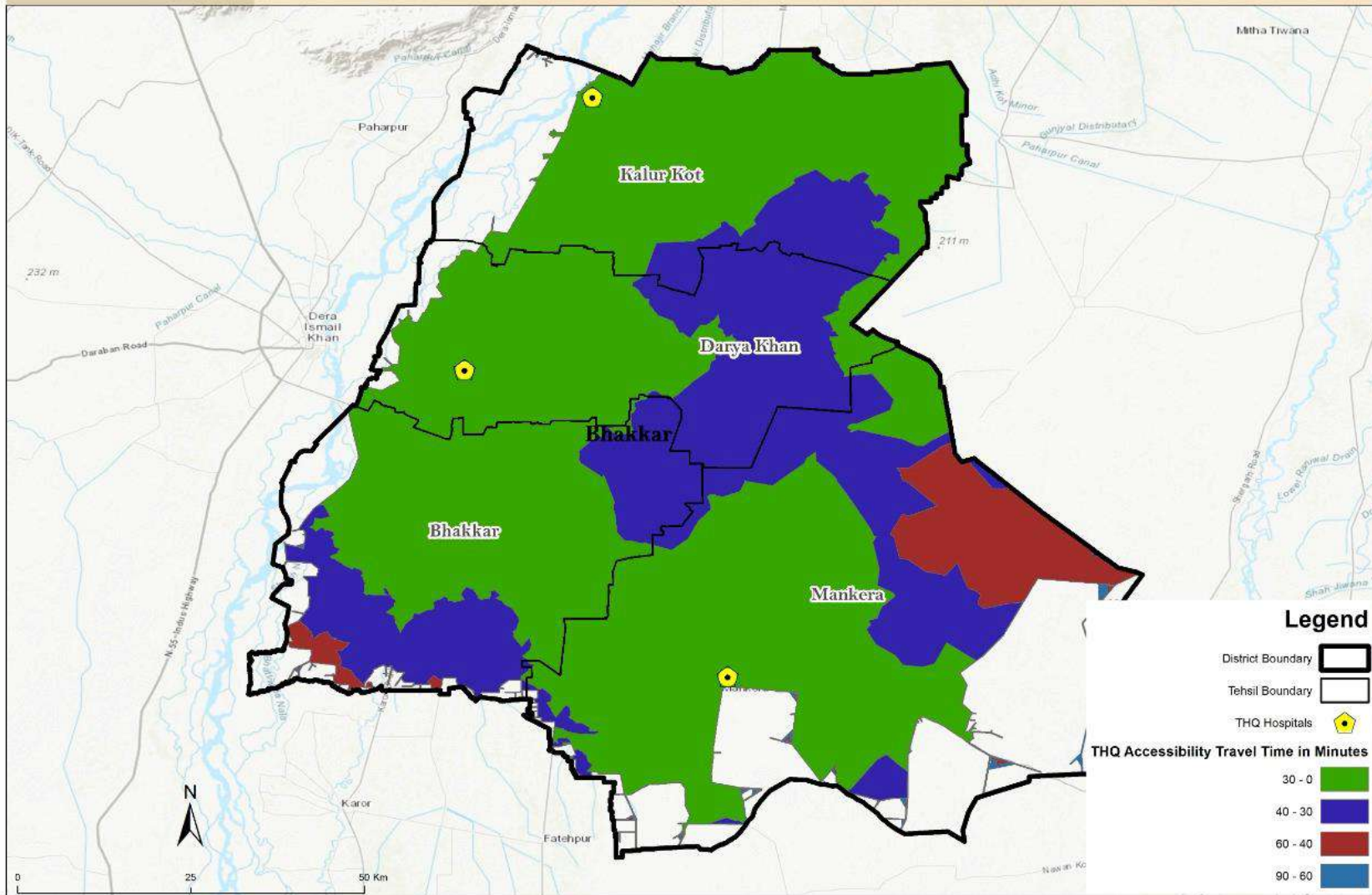


Figure 32: Uncovered areas - THQ

Map of Health Facilities of DHQ Accessibility (Bhakkar)

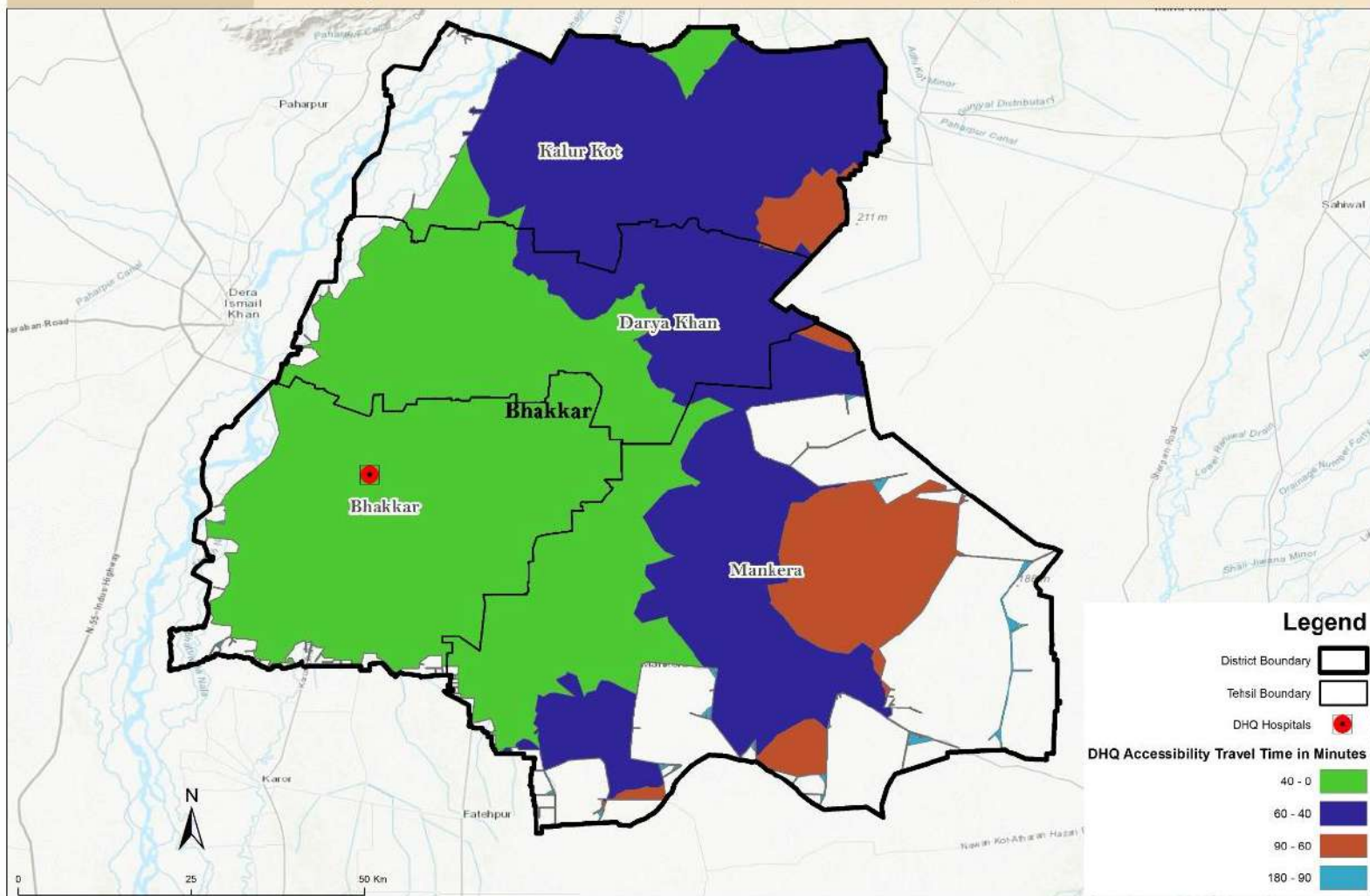


Figure 33: Uncovered areas - DHQ

Chapter 4: Way Forward

4.1 Proposed Healthcare Interventions

Based on rigorous spatial and non-spatial analysis, this section will integrate a future portrayal of short, medium- and long-term health interventions needed to give an overall project direction for the regional development plan. Short term interventions are designed to respond to pressing problems in the existing health system of Sargodha division. It will include improving the quality of services delivery through construction of missing wards, provision of missing services and equipment in health facilities, etc.

Table 16: Short-term proposed projects

S. No	Project Name	District	Total Cost in PKR Million
1	Improvement/renovation of Rural Dispensary ZC Chak No.57/NB Tehsil & District Sargodha.	Sargodha	14.34
2	Provision of X-Ray plant 500MA for newly up graded from BHU to RHC Chak No.75/SB Tehsil & District Sargodha.	Sargodha	9.50
3	Establishment / construction of Govt. Rural Dispensary at Chak No.142/SB Tehsil & District Sargodha.	Sargodha	40.00
4	Establishment/Construction of BHU at Nehang Tehsil Sahiwal District Sargodha	Sargodha	60.00
5	Establishment/Construction of BHU at Rahdan Tehsil Sahiwal District Sargodha	Sargodha	60.00
6	Improvement/Renovation of THQ Hospital Sahiwal District Sargodha.	Sargodha	80.00
7	Establishment/Construction of BHU Chak No.135/NB Tehsil Sillianwali District Sargodha.	Sargodha	60.00

8	Improvement/Renovation of Civil Dispensary Shahpur City	Sargodha	30.00
9	Provision of X-Ray plant 500MA for RHC Bhabra Tehsil Kotmomin District Sargodha. Re-construction of Boundary Wall with Gate & Gate Pillars for RHC Bhabra.	Sargodha	10.56
10	Revamping 2 Dispensaries (Civil Disp Sillanwali, Tehsil Sillanwali and GD Bindianwala, Derbula, Tehsil Mankera, Sargodha District)	Sargodha	36.00
11	Construction of OPD rooms and improvement of residential areas in THQ Bhera	Sargodha	80.00
12	Construction of Ware House for Bulk Storage (Medicine, Equipments, Furniture etc) for all Health Facalities Bhakkar	Bhakker	40.00
13	Revamping of Rural Dispensary, Darya Khan Tehsil, Bhakker District	Bhakker	6.00
14	Provision of missing facilities in THQ Hospital Darya Khan (Xray Plant, Nursary Block, Waiting area etc)	Bhakker	40.00
15	Construction of Building for 02-MCH Centers of District Bhakkar	Bhakker	60.00
16	Provision of missing facilities in Rural Dispensaries/ Sub Health Centers in Bhakkar District	Bhakker	85.00
17	Upgrading BHUs to 24/7 facility (BHU + Muslim Kot and BHU Jhammat Shumali in Bhakker)	Bhakker	69.00
18	Revamping of two Civil Dispensaries in Mianwali (Civil Dispensary Watta Khel, Mianwali Tehsil and Civil Dispensery Piplan, Piplan Tehsil, Mianwali District)	Khushab	12.00
19	Revamping Government Rural Dispensary, Noorpur Thal Tehsil, Khushab District)	Khushab	6.00

20	Provision of water supply at BHUs Sodhi Jaiwali and BHU Uchala in Naushera Tehsil and BHU Warcha in Quaidabad Tehsil in Khushab district	Khushab	20.00
21	Upgradation / Provision of Missing Facilities in THQ Hospital Naushera Khushab	Khushab	50.00
22	Provision of missing equipment, revamping of unused residence building and repair of boundary wall at BHU Sodhi Jaiwali, Khushab	Khushab	15.00
23	Revamping of Non-functional Rural Dispensar Mitha Khoo, Uttra, Quaidabad Tehsil, Khushab District	Khushab	10.00
24	Upgrading BHU Bijjar in Khushab to 24/7 facility	Khushab	23.00
25	Establishment of BHU at Swance, Mianwali	Mianwali	80.00
26	Revamping of two Civil Dispensaries in Mianwali (Civil Dispensary Watta Khel, Mianwali Tehsil and Civil Dispensary Piplan, Piplan Tehsil, Mianwali District)	Mianwali	12.00

Further medium- and long-term healthcare interventions listed below focuses on bringing the institutional and structural changes necessary for achieving the long-term provincial health goals as well as the Sustainable Development Goals (SDGs). These includes establishment of new health services, renovation of rural dispensaries, upgradation of THQs and digital healthcare services. Following are the list of the medium-term proposed projects with their estimated cost:

Table 17: Medium-term proposed projects

S. No	Project Name	District	Total Cost in PKR Million
1	Up-Gradation BHU Chak No.88/SB into RHC Chak No.88/SB Tehsil & District Sargodha	Sargodha	110.00

2	Up-Gradation BHU Chak No.34/SB into RHC Chak No.34/SB Tehsil & District Sargodha	Sargodha	110.00
3	Up-Gradation BHU Salam into RHC Salam Tehsil Bhalwal District Sargodha.	Sargodha	110.00
4	Up-Gradation BHU Chak No.10/NB into RHC Tehsil Bhalwal District Sargodha	Sargodha	110.00
5	Up-Gradation BHU Shah Nikdar into RHC Shah Nikdar Tehsil Sillianwali District Sargodha	Sargodha	110.00
6	Up-Gradation Civil Dispensary Gondal (ZC) into RHC Gondal Tehsil Shahpur District Sargodha	Sargodha	110.00
7	Establishment of RHC Sail More Tehsil Kot Momin District Sargodha.	Sargodha	110.00
8	Up-Gradation BHU 24/7 Dodah into RHC Dodah Tehsil Kotmomin District Sargodha	Sargodha	110.00
9	Up-Gradation BHU Kot Miana into RHC Kot Miana Tehsil Kotmomin District Sargodha	Sargodha	110.00
10	Up-Gradation BHU Talib Wala into RHC Talib Wala Tehsil Kotmomin District Sargodha	Sargodha	110.00
11	Up-Gradation Civil Dispensary Laksian into RHC Laksian Tehsil Kotmomin District Sargodha	Sargodha	110.00
12	Establishment of Trauma Centre at Bhera (South) on Motorway M-2 & Modernization of Lahore-Islamabad Motorway.	Sargodha	300.00
13	Up-Gradation BHU Ali Pur Syedian into RHC Tehsil Bhera District Sargodha	Sargodha	110.00
14	Construction of offices for the Director Health Services/CEO & DHO in District Sargodha.	Sargodha	128.00
15	Upgradation of 3 BHUs to RHC level facility (BHU Muslim Kot, Tehsil Bhakker, BHU 24/7 Hassan Wala, Tehsil Kalurkot and BHU 24/7 Kohawar Kalan, Tehsil Darya Khan Bhakker)	Bhakker	90.00

16	Construction of Approach Roads, provision of missing equipment and revamping of residential building in 8-Basic Health Units Bhakkar (BHU Chak 73ML, BHU Litten, BHU Mahni, BHU Shaheedan, BHU Jehanwala, BHU Barrangga Tehsil Kallur kot, BHU Bharmi Nawab and BHU Karlu wala Tehsil Mankera)	Bhakker	120.00
17	Provision of missing facilities in THQ Hospital Mankera (Equipment, City Scan, Digital Xray Plant, Revamping of Residences)	Bhakker	120.00
18	Construction of CEO DHA office Building Bhakkar	Bhakker	120.00
19	Upgradation of Basic Health Units Gohar Wala to level of RHC District Bhakkar	Bhakker	120.00
20	Upgradation of Basic Health Units Khansar to level of RHC District Bhakkar	Bhakker	120.00
21	Construction of Emergency Room, Medicine store, admin block and waiting area for Pharmacy at THQ Noorpur Thal Khushab	Khushab	50.00
22	Provision of water supply at BHUs Sodhi Jaiwali and BHU Uchala in Naushera Tehsil and BHU Warcha in Quaidabad Tehsil in Khushab district	Khushab	20.00
23	Upgradation of DHQ Hospital Jauharabad from 125 to 300 beds	Khushab	1,200.00
24	Construction DHA Office Complex Khushab	Khushab	130.00
25	Rehabilitation/Re-Construction of 14 No GRDs in District Khushab	Khushab	189.00
26	Revamping of 9 non-functional facilities in Mianwali	Khushab	90.00

27	Revamping of 9 non-functional facilities in Mianwali	Mianwali	90.00
28	Provision of MRI and Incinerator, construction of new staff residence rooms and revamping of existing residence building in DHQ Mianwali	Mianwali	100.00

Following are the list of the long-term proposed projects with their estimated cost:

Table 18: Long term proposed projects

S. No	Project Name	District	Total Cost in PKR Million
1	Up-Gradation RHC Phullarwan into THQ Level Hospital Phullarwan Tehsil Bhalwal District Sargodha	Sargodha	150.00
2	Up-Gradation RHC Jhawarian into THQ Level Hospital Jhawarian Tehsil Shahpur District Sargodha	Sargodha	150.00
3	Up-gradation of Municipal General Hospital Satellite Town Sargodha under DHA into THQ Level Hospital Sargodha city.	Sargodha	150.00
4	Upgradation of BHUs to RHC level facility (Bhu 24/7 Jahanian Shah, Tehsil Sahiwal, Bhu Shaheenabad 24/7 Tehsil Sillanwali, Bhu Dharema 24/7 Tehsil Sargodha and Bhu Hathiwind, Khan Muhammad Wala 24/7, Tehsil Bhera)	Sargodha	440.00
5	Revamping of non-functional facilities (Rural Dispensary 17/NB - Chak No. 18/Nb, Tehsil Bhalwal, MCH CTR Jhawarian Tehsil Shahpur and MCH Center Wadhan, Tehsil Bhera)	Sargodha	130.00
6	Upgradation of Government Mian Maula Bakhsh Hospital to Mother & Child Hospital	Sargodha	5,000.00
7	Upgrading BHUs to 24/7 facility (21 facilities in Sargodha)	Sargodha	529.00

8	Upgradation of Sargodha Medical College to Medical University	Sargodha	1,000.00
9	Upgradation / Provision of missing facilities in DHQ Sargodha and THQ Hospital Sargodha	Sargodha	200.00
10	Provision of missing facilities in 05-Rural Health Centers of Bhakkar District (RHC Jandanwala, RHC Dullewala, RHC Haiderabad, RHC Dhandla, RHC Behal)	Bhakker	150.00
11	Provision of missing facilities at DHQ Hospital Bhakkar (Machine, Water Filteatation plants, Cafeteria, Exension of Nursary Block, Male / Female Hostels, Shelter Home etc.)	Bhakker	200.00
12	Provision of missing facilities, revamping of unused residential buildings, repair of boundary walls, improvement of sewerage system and provision of water supply in 31 BHUs of Bhakkar District	Bhakker	465.00
13	Establishment of Trauma Center at Sarai Muhajir Bhakkar	Bhakker	170.00
14	Establishment of Trauma Center at RHC Dullewala Bhakkar	Bhakker	170.00
15	Provision of missing equipment, revamping of unused residence building and repair of boundary wall at 11 BHUs in Bhakker	Bhakker	165.00
16	Upgradation / provision of missing facilities in THQ Hospital Kallur Kot Bhakker	Bhakker	100.00
17	Upgradation / provision of missing facilities in THQ Hospital Darya Khan Bhakker	Khushab	150.00
18	Upgradation of DHQ Hospital Khushab 125-bedded to 300 bedded	Khushab	100.00
19	Provision of MRI and Incinerator, construction of new staff residence rooms and revamping of existing residence building in DHQ Mianwali	Khushab	100.00

20	Upgradation / Provision of missing facilities in THQ Quaidabad Khuhshab	Khuhshab	100.00
21	Trauma Center at Kot Belian	Mianwali	150.00
22	Trauma Center at Kundal	Mianwali	150.00
23	Digitalization of EMR system of 3 THQs in Mianwali	Mianwali	270.00

4.3 Proposed sites for new facilities

With increasing population of the region, there is increasing amount of pressure on existing health infrastructure network. The existing health system requires one District Headquarter (DHQ) Hospital in each district and one Tehsil Headquarter (THQ) Hospital in each tehsil. The lowest level facility is Basic Health Unit (BHU), where a cluster of 5 to 10 BHUs are linked to nearest Rural Health Center (RHC). The above spatial analysis has also identified some uncovered areas in the region where the existing distribution of health facilities network is inaccessible for the population. In Mianwali and Bhakkar district, it can be seen that the area with high population density is not covered with any health facility, thus there is an opportunity for the establishment of new facilities for increasing access to healthcare facilities.

Using GIS tools and techniques, following areas are proposed for a new facility in Mianwali district, such as a BHU. The blue star on the figure 23 indicates the proposed site for a new health facility in Mianwali tehsil. This area has limited public health facilities nearby.

Health Facilities: District Mianwali

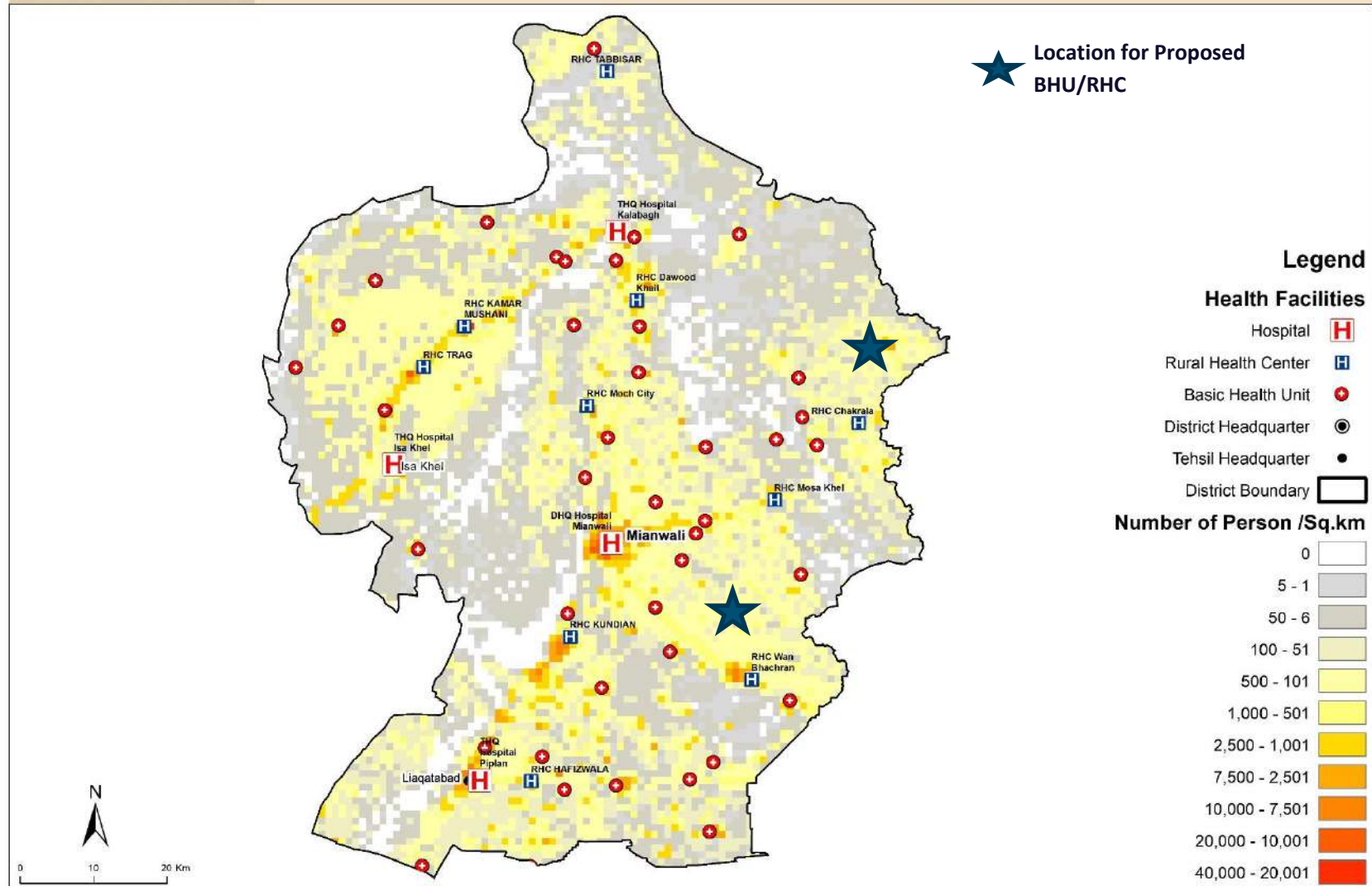


Figure 34: Proposed site for new facility in Mianwali district
 Source: The Urban Unit database

According to Urban Unit MIS analysis, the following heat map for site suitability shows that this area lies in “moderately suitable” area, represented by light green area. Healthcare site suitability is a complex task that requires evaluation of different factors, thus the MIS is based on multi-criteria approach including factors such as Land Use Land Cover (LULC), accessibility to main roads, streets, railway and highways, distance from nearest BHUs and educational facilities, and distance from water supply and green area. Thus, new facilities can be constructed here, preferably a BHU.

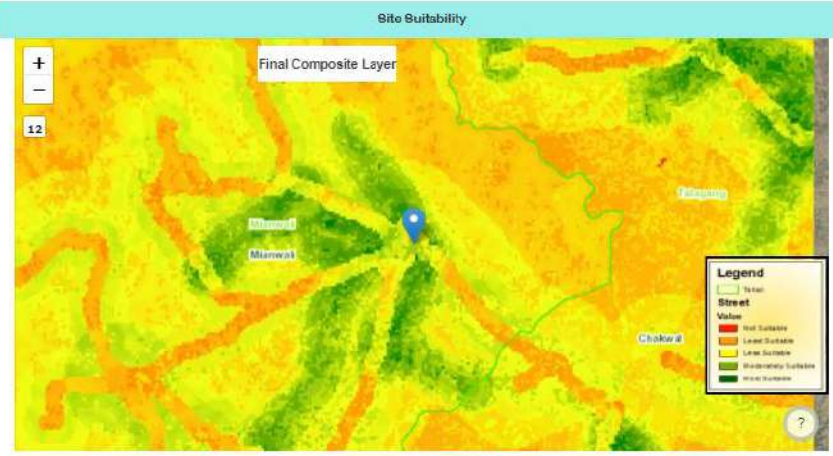
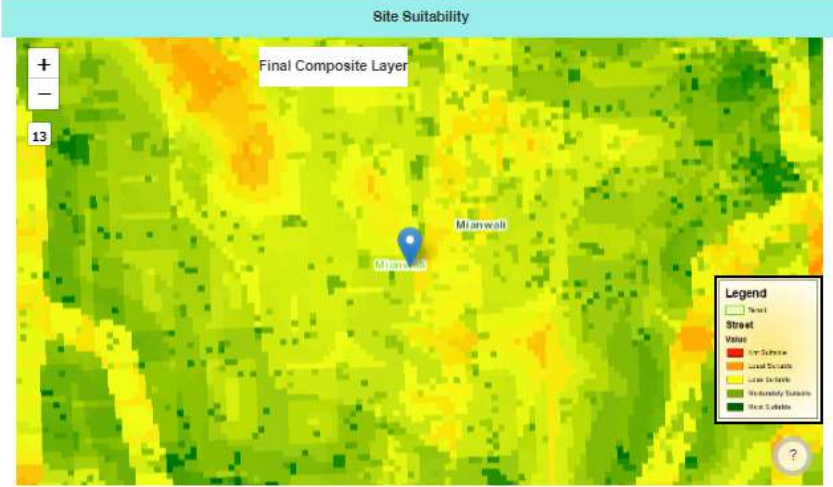
<p>District: Mianwali Tehsil: Mianwali Union Council: Chakrala Beds to 1000 population ratio (district): 0.52 Health SDSS: Moderately suitable area for a new facility, preferably a BHU</p>	
<p>District: Mianwali Tehsil: Mianwali Beds to 1000 population ratio (district): 0.52 Health SDSS: Moderately suitable area for a new facility</p>	

Figure 35: Heat maps for site suitability of health facility in Mianwali

Source: Urban Unit Health SDSS

Similarly, the map on the next page identifies two areas for new facilities in Bahawalnagar, indicated with blue stars. It can be seen that there are no health facilities nearby even though there is sufficient population density.

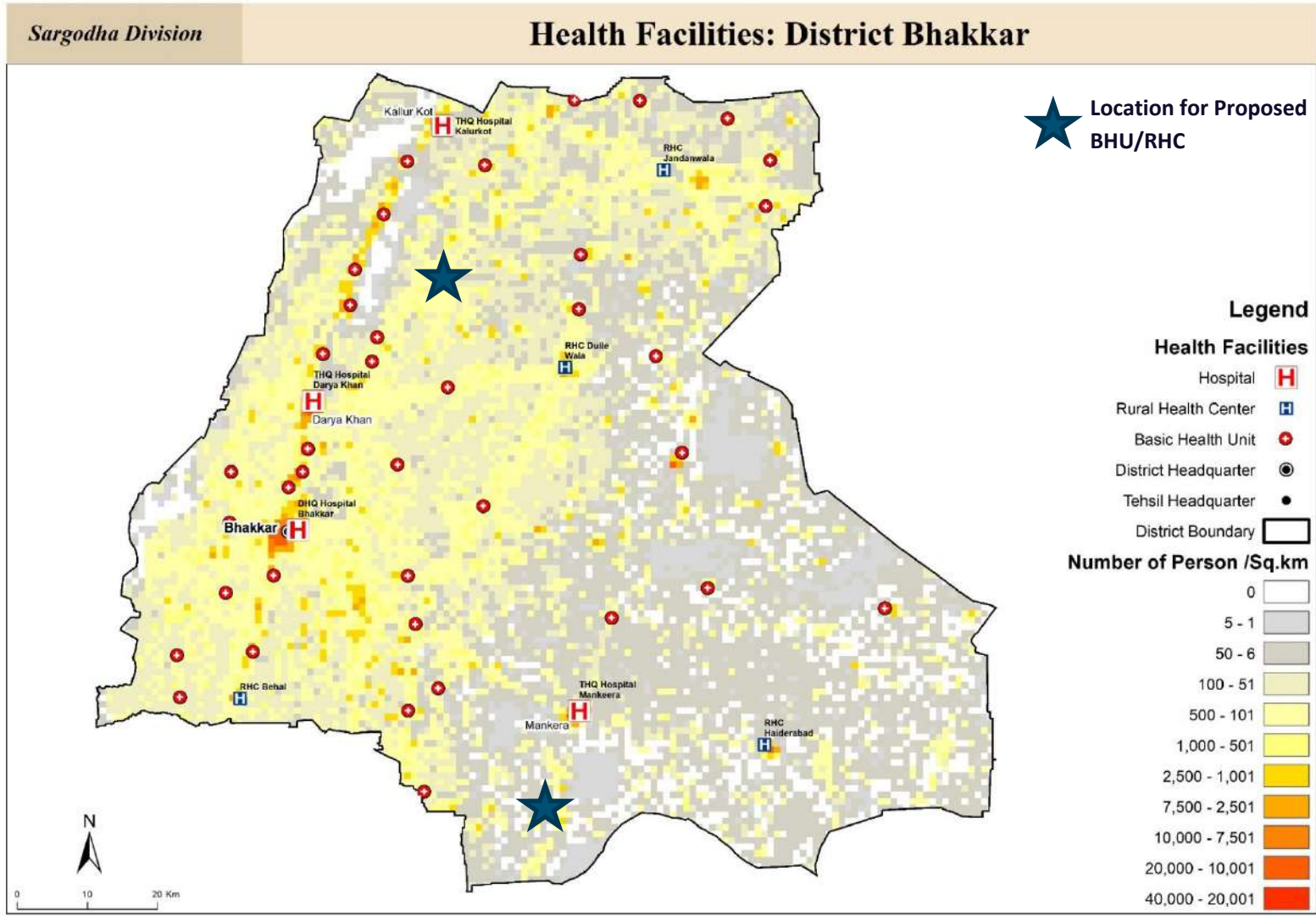


Figure 36: Proposed site for new facility in Bhakkar district
 Source: The Urban Unit database

According to Urban Unit MIS analysis, both proposed sites for BHUs can be seen lying in “moderately suitable” area.

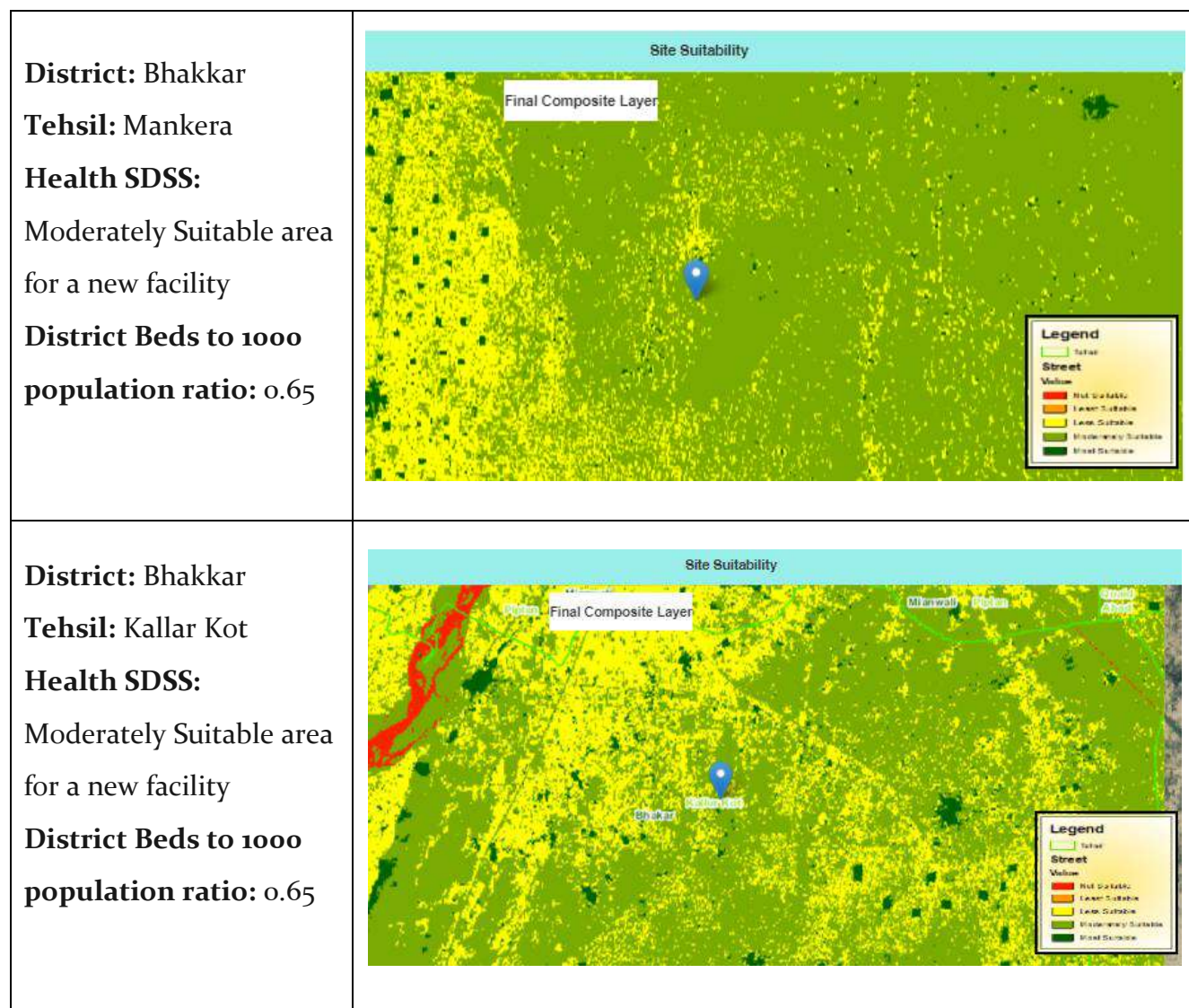


Figure 37: Site Suitability of proposed sites for health facilities in Bhakkar

Source: Urban Unit Health SDSS

Annexure 1: Condition Assessment Forms

Condition Assessment Form for Basic Health Units (BHUs)

Condition Assessment Form for Basic Health Units			
based on Minimum Service Delivery Standard for Category III HCEs (BHUs)			
General information			
1	UC name		
2	Type of BHU (BHU, BHU plus or BHU 24/7)		
3	Geo-coordinates		
4	Is the facility connected to a street or main road? (MSDS 1)		
5	Name, designation and number of the in-charge		
6	Catchment population (max 25,000 as per MSDS)		
7	Functional/non-functional?		
8	Average OPD in a day		
Facility Outlook			
9	How many beds are available? (max 2)		
10	Which equipment are not functional? (ultra sound machine, baby warmer etc.)		
11	Which health services are missing? (labour, family planning etc.)		
12	How many Lady Health Workers are working under LHVs? (as per IRMNCH)		
		Yes	No
13	Is there a need for whitewash?		
14	Availability of OPD Service?		
15	Availability of patient waiting area?		
16	Is the Labour Room functional?		
17	Availability of electricity, gas, toilet, water (MSDS 4)?		
18	Is free of cost medicine available?		
19	Are the drugs out of stock?		
20	Is the medical doctor available?		
Required Pictures			
21	Sign board and boundary wall (MSDS 1)		
22	Organogram in the in-charge room (MSDS 3)		
23	'Sanctioned vs filled posts' chart in the in-charge room (MSDS 3)		

24	List of essential drugs displayed in the in-charge room (MSDS 17)	<input type="checkbox"/>	<input type="checkbox"/>
25	Colour coded (yellow, red, white) registers and waste bins for waste generation (as per Infection Control Program)	<input type="checkbox"/>	<input type="checkbox"/>
26	Staff residence building	<input type="checkbox"/>	<input type="checkbox"/>

Condition Assessment Form for Rural Health Centres (RHCs)

Condition Assessment Form for Rural Health Centres based on Minimum Service Delivery Standard for Category II HCEs (RHCs)			
General information			
1	UC name		
2	Type of RHC (RHC or RHC plus)		
3	Geo-coordinates		
4	Is the facility connected to a street or main road? (MSDS 1)		
5	Name, designation and number of the in-charge		
6	Catchment population (max 100,000 as per MSDS)		
7	Functional/non-functional?		
8	Average OPD in a day		
Facility Outlook			
9	How many beds are available? (max 20 as per MSDS)		
10	Which equipment are not functional? (ultra sound machine, baby warmer etc.)		
11	Which health services are missing? (labour room, dental, family planning etc.)		
12	How many Lady Health Workers are working under LHVs? (as per IRMNCH)		
		Yes	No
13	Is there a need for whitewash?		
14	Availability of OPD Service?		
15	Availability of patient waiting area?		
16	Is the Labour Room functional?		
17	Availability of electricity, gas, toilet, water (MSDS 4)?		
18	Is free of cost medicine available?		
19	Are the drugs out of stock?		
20	Is the medical doctor available?		

Required Pictures			
21	Sign board and boundary wall (MSDS 1)		
22	Organogram in the in-charge room (MSDS 3)		
23	'Sanctioned vs filled posts' chart in the in-charge room (MSDS 3)		
24	List of essential drugs displayed in the in-charge room (MSDS 17)		
25	Colour coded (yellow, red, white) registers and waste bins for waste management (as per Infection Control Program)		
26	Staff residence building		