Project Evaluation Series
23/2025

Evaluation of the project "Transforming the Indus Basin with Climate Resilient Agriculture and Water Management"

Interim report
Project code: GCP/PAK/146/GCF

Annex 1. Analysis of project relevance

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome, 2025

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1. Introduction

1. The relevance of the project is assessed by answering three questions:

   i. how project design responds to beneficiaries needs and priorities;
   ii. how much the project is responsive to climate-related needs; and
   iii. how direct and indirect beneficiaries were identified.

2. An in-depth literature review and desk analysis has been conducted to understand the climate change threats in the Indus Basin area, the potential role of climate resilience agriculture (CRA) and on-farm water management (OFWM) practices to increase resilience and the vulnerability status of the selected areas and beneficiaries for project implementation. This evidence has been triangulated with project reports and results from baseline analysis and qualitative data collection (FGDs and KIIs) to verify that:

   i. the project area selected, and its inhabitants suffer from climate change threats and will benefit from increased resilience;
   ii. the proposed activities are adequate to climate-related needs of the selected project area;
   iii. selected implementation areas at all administrative levels (provinces, districts, union council and villages) are in line with project objectives; and
   iv. beneficiaries enrolled in project activities live in selected areas and are vulnerable farmers.

3. The analysis confirms the relevance of the project in the selected areas, and of the implemented activities. In particular:

   i. Extensive evidence shows the extreme vulnerability of the Indus Basin to climate change threats and their potential catastrophic repercussions to the whole country in terms of food security, water availability and energy production if adequate measures to increase resilience are not taken.
   ii. Existing evidence from previous projects in Pakistan and in other countries facing similar threats and challenges shows the efficacy of CRA and OFWM practices to increase farmers resilience by mitigating the negative effects of climate change such as water shortage and depletion of natural resources (i.e., groundwater and soil), increasing yields and crop production and improving farmers food security. Moreover, extension services and awareness outreach are critical factors for the effective adoption of CRA and OFWM practices.
   iii. The validation of the methodology adopted to select project implementation areas shows:
      - The vulnerability status of the selected districts to natural hazards, food insecurity and poverty. On the other hand, results for percentage of cropped area and share of smallholder farmers and agricultural households are more heterogenous, with the selected districts not necessarily ranking at the top of their provinces. Nevertheless, economy and livelihoods of all the eight targeted districts rely heavily on the agricultural sector, hence their population will undoubtedly benefit from increased resilience to climate change. The validation exercise confirms the relevance to project objectives and activities of the eight selected districts.

- The FAO Office of Evaluation team recognizes that the methodology used to select targeted Union Councils builds on reliable data sources and follows a scientific approach. On the other hand, such methodology has not been adequately documented, hence critical pieces of the analysis are not replicable with the information currently available, resulting in a partial validation. Similarly, the FAO Office of Evaluation team noticed a gap in institutional knowledge, with many details on how the multiple criteria decision analysis (MCDA) was developed and implemented got lost due to staff turnover and incomplete handovers to other team members.
- Most targeted villages fit the established eligibility criteria, though criteria seem to have been applied in a flexible way, with the inclusion of villages that do not necessarily comply with all the requirements.

iv. Results from the baseline survey triangulated with external data sources and information form the qualitative data collection confirm the overall alignment of the beneficiaries selected with the targeting criteria, and to some extent the relevance of the beneficiaries selected compared to the general population.

2. Indus Basin's vulnerability to climate change

4. In the context of Pakistan's heavy reliance on the Indus Basin for his water source and considering it is the area where the majority of the population live, any potential impacts of climate change on this area will have severe repercussions on the whole country. Indeed, in Pakistan almost all agricultural land is dependent on irrigation, and the Indus Basin Irrigation System accounts for 95 percent of the country's total irrigation system (ADB, 2017).

5. Moreover, the Indus River is also critical for its contribution to power production through hydropower stations, which is estimated at 30 percent of the total national power production. The impact of climate change on the Indus Basin's precipitation pattern and flows, together with the rise in temperature, could adversely affect agricultural production, human health, energy consumption and infrastructures (Khan *et al.*, 2023). Indeed, a rise in temperature may result in a rapid melting of snowfall and glaciers which, together with more frequent episodes of heavy rainfall, may increase the risk of flash floods on a short-term basis, and may affect water availability of perennial streams on a long-term basis (íbid.).

6. Moreover, rise in temperature is associated with more water loss, particularly evapotranspiration, which increases stress on crop water demand (Khan *et al.*, 2023.). On the other hand, higher temperatures are associated with increased energy and water consumption and groundwater depletion. Finally, global warming and variability in precipitation may result in changes to cropping patterns and may affect crops' health, with an increased risk of diseases (Khan *et al.*, 2023.). In conclusion, historical and future projected changes in climatic patters over the Indus River Basin threaten agricultural and energy production, and food security in Pakistan, in particular for vulnerable farming communities (Heureux *et al.*, 2022). Identify efficient adaptation methods to increase farmers' resilience will be key to mitigate the predicted negative impacts on their livelihoods and food security. Relevant adaptation measures include the adoption of climate resilient agriculture practices and on-farm water management (Heureux *et al.*, 2022).

3. Adequacy of proposed activities: Climate resilience agriculture and on-farm water management practices

3.1 Climate resilience agriculture and resilience

7. Agriculture plays a pivotal role in socio-economic development, by sustaining food security and by generating income and livelihood sources. On the other hand, extreme weather events and climate change threaten directly food production, and consequently income and food security, especially for smallholder farmers (Acevado *et al.*, 2020).

8. Climate resilient agriculture (CRA) is a sustainable management model aimed at reducing the vulnerability and exposure of agroecosystems to climate change. By integrating a range of risk management practices, CRA enhances system resilience and adaptability to climate change, thereby addressing hunger and poverty (Zong *et al.*, 2022). Jamil *et al.*, (2021) examined the sustainability and productivity of cotton in Punjab, Pakistan, focusing on the implementation of the sustainable land and water management practices of CRA related to irrigation (bed sowing, drainage management and laser land levelling), crop (drought and flood tolerant varieties) and soil (minimum tillage).

9. The study finds that the sustainable land and water management practices improve productivity, offer distinct advantages over traditional farming methods, and mitigate the negative effects of climate change, water shortage and depletion of natural resources (i.e., groundwater and soil). In their study in India, Ghosh (2019) assessed the significance of climate-smart agriculture in fostering sustainable agricultural development, ensuring food security, and mitigating the adverse effects of climate change on agricultural productivity. Results indicate that farmers implementing climate-smart agriculture adaptation strategies achieved higher output, yield, and returns compared to non-adopters. Abid *et al*. (2016) explore the adaptation strategies of wheat farmers in rural Pakistan to climate change, and its determinants and its impacts on food productivity and crop income. Results show that adopting practices such as changing planting calendar, choose different crop varieties and fertilizer types significantly and positively affects wheat productivity and net crop income, and thus indirectly improve farmers' wellbeing and food security.

10. Moreover, the study suggests focusing on farmers' education, access to farm advisory services and weather forecasting and marketing information to favour the adoption of CRA practices. Ali and Erenstein (2017) analysed a sample of 950 farmers from Pakistan and concluded that climate change adaptation practices at farm level can have significant development outcomes in addition to reducing exposure to weather risk. Results show that younger farmers and farmers with higher levels of education are more likely to use these adaptation practices, as do farmers that are wealthier, farm more land and have joint families. The number of adaptation practices used is positively associated with education, male household heads, land size, household size, extension services, access to credit and wealth. Finally, farmers adopting more adaptation practices had higher food security levels (8-13 percent) and experienced lower levels of poverty (3-6 percent).

3.2 On-farm water management and resilience

11. Despite having the world's largest contiguous surface water irrigation system, the Indus Basin, Pakistan has also one of the world's most water-intensive economies. More than 90 percent of freshwater is used for agriculture, with rice, wheat, cotton, maize and sugarcane using more than 80 percent. Irrigated agriculture in Pakistan provides food and livelihood security for about 220 million people, mostly living in Punjab and Sindh (Hasan *et al.*, 2021). While the current water

crisis is mostly caused by seepage from rivers and canals, poor management, pollution and salinization; climatic factors such as global warming and droughts are making it worse (Ali *et al.*, 2022). Linked to the water security issues, Pakistan is at severe risk of facing food shortage in the near future: the Indus Basin System provides water for almost 90 percent of the national food production, though the World Bank estimated that water shortage will increase to 32 percent by 2025, resulting in a food shortage of almost 70 million tonnes (Janjua *et al.*, 2021).

12. Popular irrigation methods in Pakistan waste 50-60 percent of applied irrigation water. Therefore, water-efficient irrigation technologies are required to improve agricultural productivity by preserving water resources (Rizwan *et al.*, 2018). Indeed, specific irrigation techniques (e.g. drip and sprinkler irrigation) and conservation technologies (e.g. direct-seeded rice, zero-tillage drill of wheat, bed planting, laser land levelling and crop residue retention) have significant potential for increasing water productivity (Laghari *et al.*, 2012). For example, Bhandari *et al.* (2007) examined the efficacy of watershed development programmes as adaptive responses to climate change in India and found that these initiatives generate multiple benefits, encompassing increased water levels, sustained water availability during droughts, enhanced agricultural potential and incomes leading to decreased seasonal migration, and the promotion of sustainable livelihoods. Finally, Sikka *et al.* (2022) reviewed different agricultural water management practices in India and concluded that they significantly contributed to enhancing resilience by conserving more water, increasing or maintaining yields, reducing energy and fertilizers usage and reducing greenhouse gas emissions.

3.3 Access to climate information and resilience

13. Smallholder farmers grapple with the challenge of lacking knowledge about potential CRA and OFWM practices, which undermines their adoption of such practices (Zerssa *et al.*, 2021), exposing them to the adverse effects of climate change (PATRO *et al.*, 2022). Conversely, access to reliable and actionable climate information enriches smallholder farmers' environmental understanding, empowering them to fortify their resilience and anticipate risks. This access enables them to overcome knowledge limitations earlier in time and identify appropriate agricultural technologies and adaptation measures to navigate weather variability and climate change (Belay *et al.,* 2017; Patro *et al*. 2022). Hence, governments and development partners must improve access and conditions under which farmers can gain access to climate change information (Thinda *et al.*, 2021).

14. Evidence also shows that households with access to accurate knowledge about climate change have a high perception of the risks of climate change and variability than those with a low risk perception (Etana *et al.,* 2021). In their scoping review of existing literature on CRA, Acevedo *et al*. (2020) identify that extension services and awareness outreach are critical factors for the effective adoption of CRA practices. Jiri *et al*. (2017) investigated the factors that increase resilience and cause smallholder farmers to adapt better to climate change and find that farmers with increased access to climate information through extension services were likely to have better adaptation abilities. In the same context, some gender-related evidence demonstrates that access to climate information empowers women to effectively participate in CRA trainings and adopt related practices (Patro *et al.*, 2022).

4. Assessment of project areas selection

4.1 Districts

15. The selection of project's districts and union councils relies on a two-stage MCDA technique using Geographic Information System performed by the FAO Pakistan Country Office and validated by the Government of Pakistan. First, project's districts are identified according to selected indicators, then Union Councils are chosen within the identified districts with another set of indicators. This paragraph will assess the first stage for the selection of districts, while the next paragraph will focus on the second stage to select union councils.

16. Considering the project's objectives, agriculture status, number of farming population, exposure to natural hazards and socio-economic vulnerability were chosen as the most appropriate selection criteria for districts (see Table 1). Higher weights are assigned to percentage of crop area and drought hazard index, to prioritize areas more dedicated to agriculture and more susceptible to climate change, while the other indicators are weighted equally. A vulnerability index is calculated by summing up each criterion, and districts are ranked in categories from 1 (lowest priority) to 4 (highest priority).

17. Results from the analysis were presented to the provincial governments (see Appendix 1), and the eight project districts were selected. Initially four districts were selected for Punjab (Khanewal, Lodhran, Multan, Muzaffargarh) and three for Sindh (Badin, Sanghar and Umerkot); however, upon request from the Punjab government, Dera Ghazi Khan was included as well due to its agricultural areas being predominantly rainfed. To verify the correct identification of targeted districts through the MCDA, each criterion and indicator was analysed by using secondary data sources and results from the qualitative data collection, and results compared against project's documents and reports.[1]

Table 1. Selection criteria for districts

Criteria	Indicator	Weight	Source
Agriculture status	Percentage of four crops classes in FAO land cover	20%	2013 FAO and SUPARCO land cover data
Farming population	Number of smallholder farmers (%)	10%	2010 Agricultural Census (Pakistan Bureau of Statistics)
	Number of agricultural households (%)	10%	
Natural hazard	Flood hazard	10%	Joint Research Centre of the European Commission
	Drought hazard index	20%	National Drought Monitoring Centre (Pakistan Meteorology Department)
	Multidimensional Poverty Index	10%	UNDP and Government of Pakistan
Socio-economic vulnerability	Food Consumption Score	10%	Food Security Assessment
	Prevalence of Undernourishment (PoU)	10%	Food Security Assessment

Source: Author' own elaboration based on information available in FAO. 2020. *Multi-Criteria decision analysis for selection of vulnerable districts: Transforming Indus Basin with climate resilient agriculture and water management*. Rome.

[1] At the time of writing this document, the FAO Office of Evaluation team was not provided with the dataset used by the FAO Pakistan Country Office to perform districts' selection, hence the analysis relied on available data sources that align the most with the source originally used.

4.2 Agriculture status criteria

18. The information about the cropped area per district was retrieved from the FAO and the Pakistan Space and Upper Atmosphere Research Commission (SUPARCO)[2] land cover mapping statistics. Land cover was classified in thirteen different categories, four of which are crop related: crop irrigated, crop marginal and irrigated saline, crop in flood plain, and crop rainfed. These crop related classes are extracted to estimate the percentage of cropped area by district. Table 2 shows the eight selected districts by crop-related land cover category and their ranking within their province in terms of total cropped area (as percentage of total land cover). From the analysis emerges that the districts selected for implementation are not necessarily those with the biggest cropped areas as percentage of total land cover in their respective provinces (see Appendix 2 and 3 for complete list of districts per province). Further details from FAO Pakistan Country Office are required to understand better how this criterion was used to inform the selection of project districts.[3]

Table 2. Cropped areas per selected districts (% of total land cover)

Province	District	Irrigated area (%)	Marginal and irrigated saline (%)	Flood plain (%)	Rainfed area (%)	Total cropped area (%)	Rank
Punjab	D. G. Khan	22.4	0.3	3.2	15.2	41.1	32nd
	Khanewal	84.9	0.6	2.1	0	87.6	15th
	Lodhran	93	0.8	0.5	0	94.3	1st
	Multan	75.9	0.6	2.9	0	79.4	18th
	Muzaffargarh	56.8	0.7	10.5	0	68	23rd
Sindh	Badin	68.9	13.2	0	0	81.1	3rd
	Sanghar	36.8	5.3	0	0	42.1	18th
	Umer Kot	31.5	21.4	0	0	52.9	14th

Note: Districts ranked within same province. Ranking is based on total cropped area (% of total land cover). Punjab has a total of 36 districts and Sindh a total of 24 districts.
Source: Authors' own elaboration using data extracted from FAO & SUPARCO. 2014. *Land Cover Atlas of Pakistan. The Sindh Province* & *Land Cover Atlas of Pakistan. The Punjab Province*. Rome and Islamabad.

4.3 Farming population

19. Number of smallholder farms and the number of agricultural households are extracted from 2010 Agricultural Census (Pakistan Bureau of Statistics, 2010). Table 3 summarizes the indicators for the eight selected districts and their respective ranking within their provinces (see Appendices 4 and 5 for complete list of districts for each province). The analysis suggests that the districts included in the project are quite heterogeneous, both in terms of percentage of smallholder farms and percentage of agricultural households. Indeed, while some of the districts rank at the top of their provinces, others have some of the lowest rates of smallholder farms and/or agricultural households. Similarly to the agricultural status criterion previously analysed, additional information from the FAO Pakistan Country Office on how these indicators informed the selection is required.

[2] Dataset developed under the project GCP/PAK/125/USA.
[3] The FAO Office of Evaluation was informed that the personnel who was directly involved in performing the analysis is no longer working for the FAO Pakistan Country Office, hence it has not been possible to retrieve more details.

Table 3. Smallholder farmers and agricultural households of selected districts

		Smallholder Farms			Agricultural Households			
Province	**District**	**N. of farms**	**%**	**Rank**	**Total**	**Agr. HH**	**%**	**Rank**
Punjab	D. G. Khan	120 936	63	24	323 345	248 722	77	4th
	Khanewal	90 018	67	14	396 406	209 880	53	21st
	Lodhran	80 863	67	13	288 513	200 107	69	6th
	Multan	74 685	70	7	464 972	169 348	36	33rd
	Muzaffargarh	205 366	70	8	618 510	398 304	64	10th
Sindh	Badin	48 720	67	21	260 972	152 742	59	13th
	Saghar	54 670	75	16	296 147	143 760	49	17th
	Umerkot	76 949	85	11	163 032	123 472	76	2nd

Note: Districts ranked within their respective provinces. Punjab has a total of 38 districts and Sindh a total of 23 districts in the 2010 Agricultural Census. Number of smallholder farms calculated by summing up different land size categories according to the following definition of smallholder: below 5 acres in Punjab and below 12.5 acres in Sindh. Agricultural Household includes only households classified as Agricultural Households, and does not include Livestock Holders and/or Farm Household – Total.
Source: Authors' own elaboration using Pakistan Bureau of Statistics. 2010. *2010 Agricultural Census*. Islamabad. https://www.pbs.gov.pk/sites/default/files/agriculture/publications/agricultural_census2010/WRITE-UP%20AGRI.%20CENSUS%202010.pdf

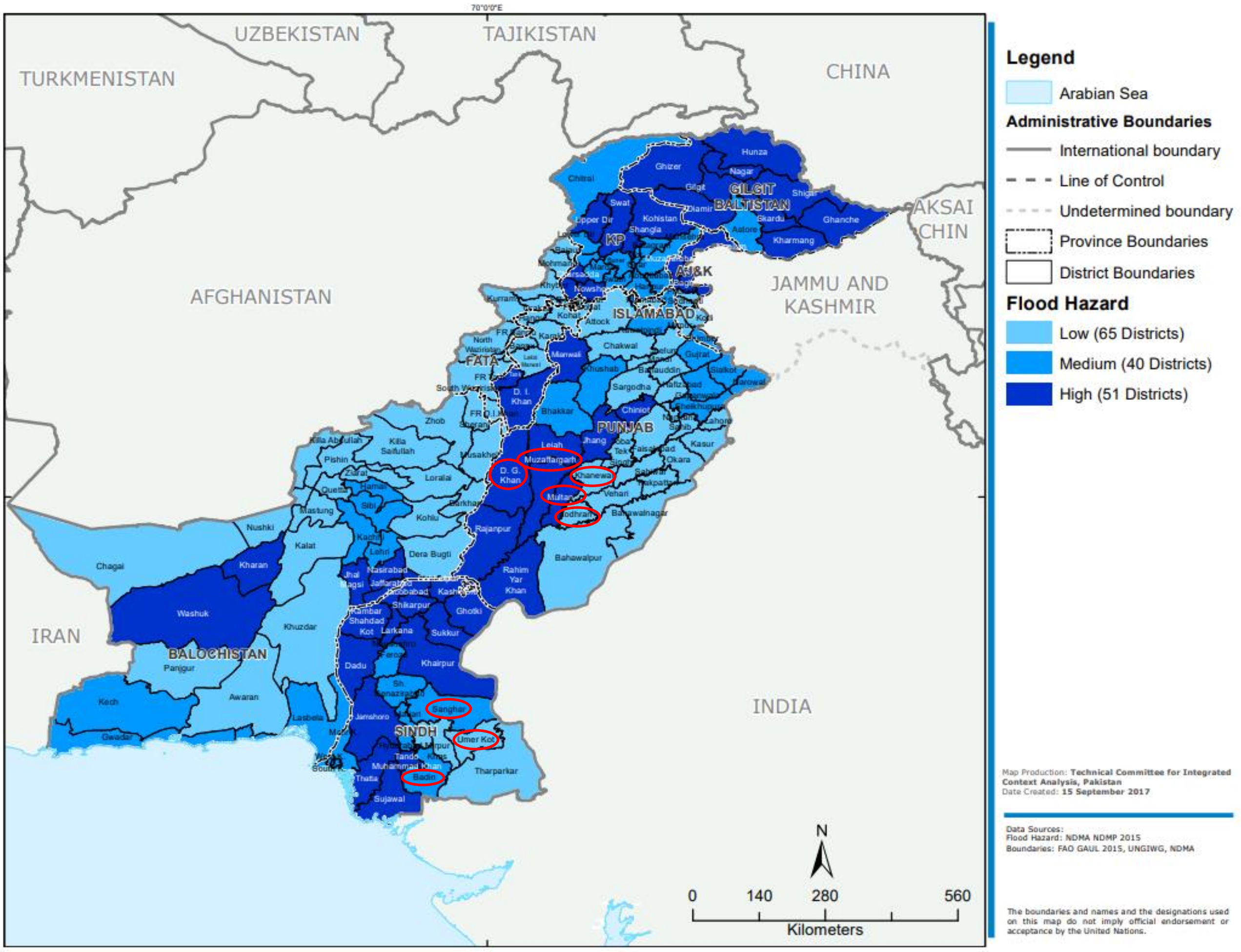
4.4 Exposure to natural hazards criteria

Flood

20. To verify whether the targeted districts are vulnerable to floods, the analysis relies on the flood hazard map developed jointly by the Pakistan National Disaster Management Authority (NDMA) and the World Food Programme (WFP) as part of a comprehensive Integrated Context Analysis on Vulnerability to Food Insecurity and Natural Hazards (NDMA & WFP, 2017) (see Figure 1). Project's districts are highlighted in red, with three classified at low risk (Khanewal, Lodhran and Umerkot), two at medium risk (Badin and Sanghar) and three at high risk (Dera Ghazi Khan, Muzaffargarh and Multan). These results are consistent with the 2019 National Disaster Response Plan (NDMA, 2019), which classifies as most vulnerable to floods and flash floods Dera Ghazi Khan and Muzaffargarh districts in Punjab, and Badin and Sanghar in Sindh (see map in Appendix 6).

21. In summary, evidence from government data sources confirms that five out of eight districts targeted by the project are at medium or high risk of flood hazard (Badin, Sanghar, Dera Ghazi Khan, Muzaffargarh and Multan) based on analysis of historical data of flood recurrence and severity.

Figure 1. Flood hazard map

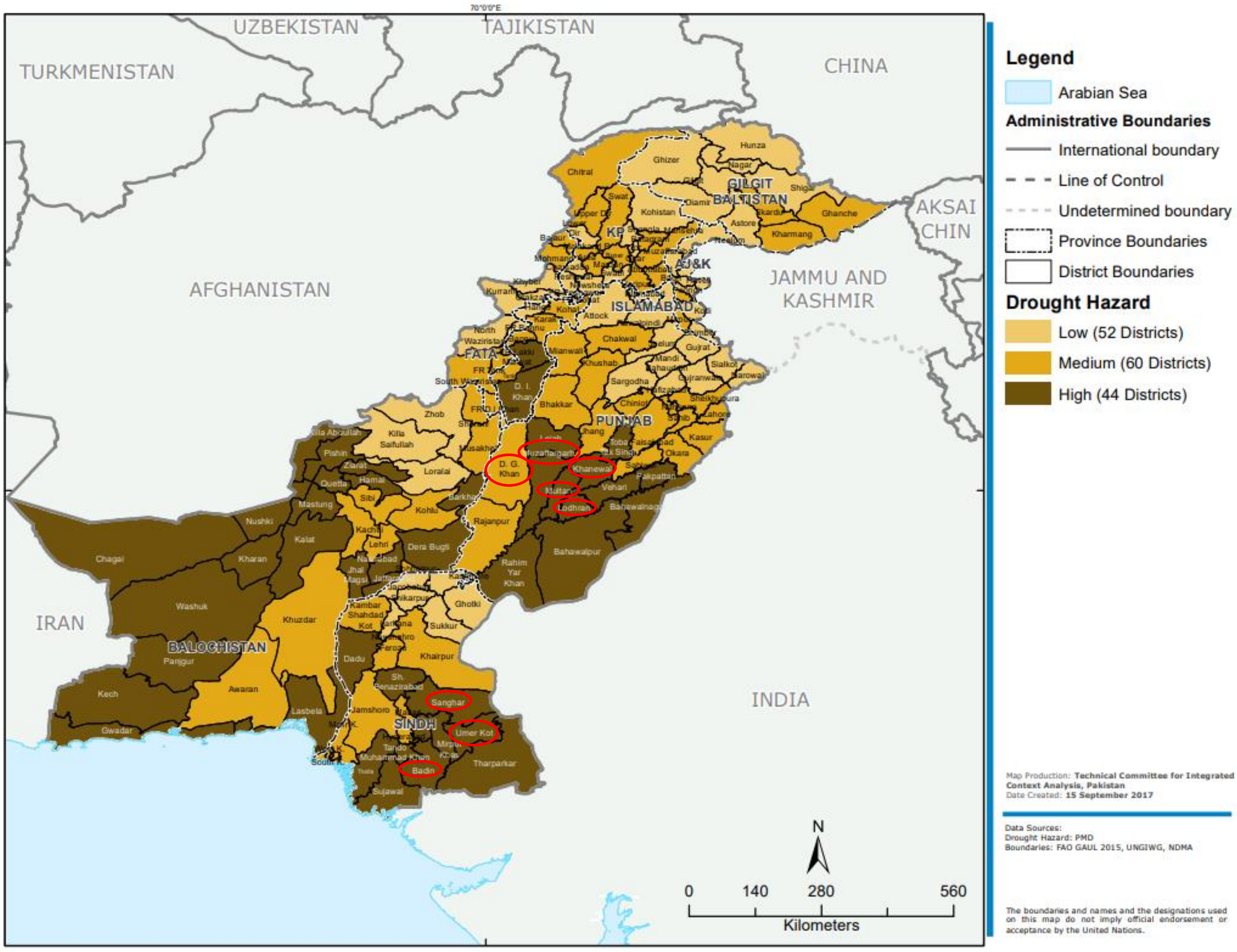


Notes: Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Project's districts highlighted in red by authors. Map developed from NDMA Flood Hazard Index, based on number of recorded flood events from 1950 to 2015 and their severity, including 2010 super-flood. The original dataset combined these two parameters with Jenks Natural Breaks used to classify districts into a 5-point scale of hazard level. The original five levels hazard index has been reclassified into a 3-point scale: Low (Very Low and Low), Medium (Medium) and High (High and Very High).
Source: NDMA and WFP. 2017. *Integrated Context Analysis (ICA) on Vulnerability to Food Insecurity and Natural Hazards in Pakistan*. Islamabad and Rome.
https://www.pdma.gov.pk/sub/uploads/Integrated%20Context%20Analysis%20(ICA)%20On%20Vulnerability%20to%20Food%20Insrity%20and%20Natural%20Hazards%20Pakistan,%202017.pdf

Drought

22. Areas most vulnerable to drought are identified through the Drought Hazard Index developed by the Pakistan Meteorological Department. Indeed, all the selected districts are at high risk but Dera Ghazi Khan, which is classified as medium risk (see Figure 2) (NDMA & WFP, 2017), and results are perfectly aligned with the latest available National Drought Monitoring Centre map from October 2023 (see Appendix 7). Indeed, southerly regions of Pakistan including Punjab and Sindh have been experiencing winter warming and increase in the frequency of heat waves has been documented particularly in Sindh province (ADB & World Bank, 2021; ADB, 2017).

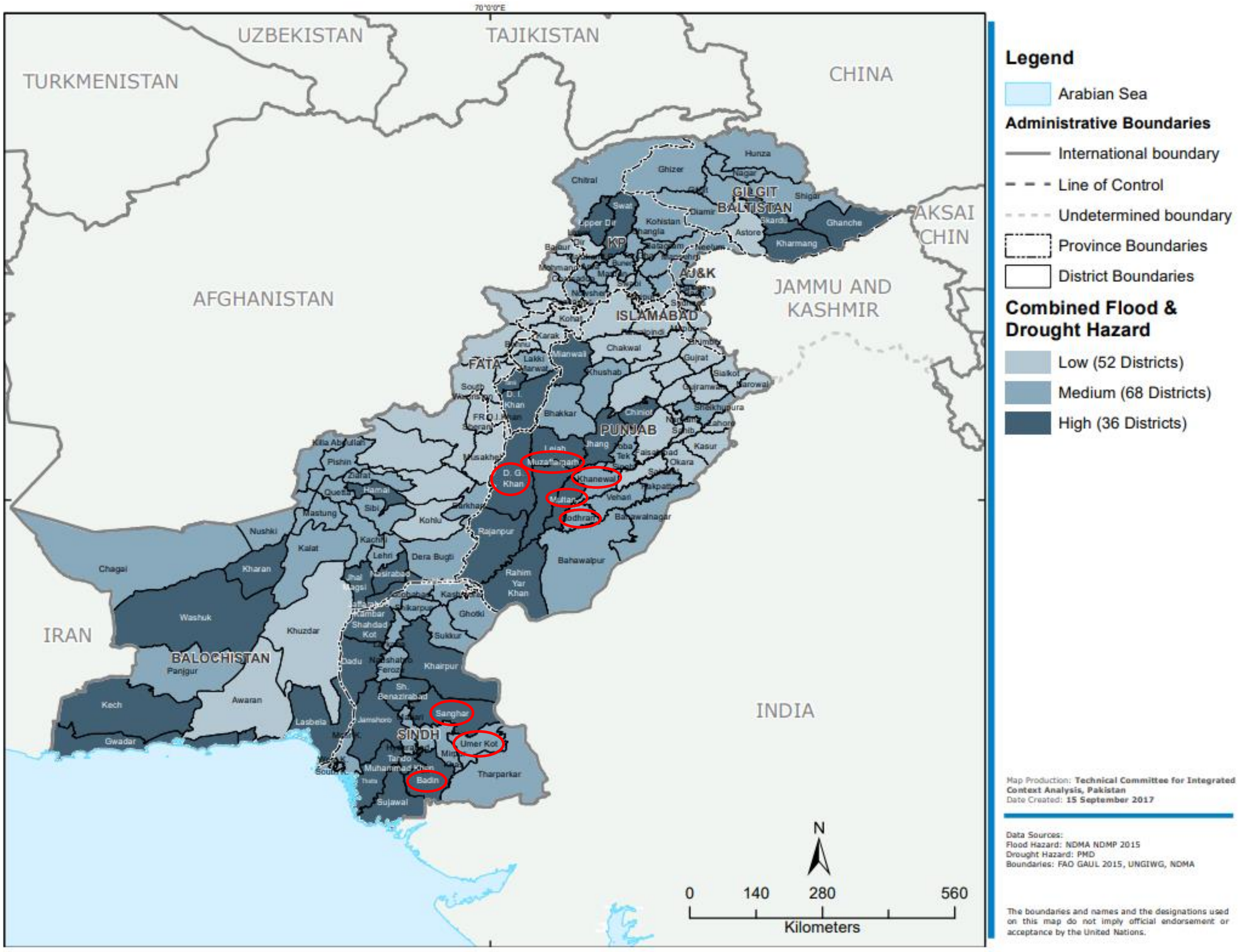
Figure 2. Drought hazard map



Notes: Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Project's districts highlighted in red by authors. Map developed based on Drought Hazard Index from the National Drought Monitoring Centre of Pakistan Meteorological Department based on Standardized Precipitation Index (SPI) data from 1951 to 2010. The original dataset was a 5-point scale of hazard level, which is reclassified into a 3-point scale as follows: Low (Verly Low and Low), Medium (Moderate) and High (High and Extremely High).
Source: NDMA and WFP. 2017. Integrated Context Analysis (ICA) on Vulnerability to Food Insecurity and Natural Hazards in Pakistan. Islamabad and Rome.
https://www.pdma.gov.pk/sub/uploads/Integrated%20Context%20Analysis%20(ICA)%20On%20Vulnerability%20to%20Food%20Insrity%20and%20Natural%20Hazards%20Pakistan,%202017.pdf.

23. When combining both flood and drought hazard, five districts are classified as high (Badin, Sanghar, Dera Ghazi Khan, Muzaffargarh and Multan) and three as medium (Umerkot, Lodhran and Khanewal), confirming the validity of the selection of FAO Pakistan country office in terms of vulnerability to natural hazards (see Figure 3).

Figure 3. Combined flood and drought hazard



Note: Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Project's districts highlighted in red by authors.
Source: NDMA and WFP. 2017. *Integrated Context Analysis (ICA) on Vulnerability to Food Insecurity and Natural Hazards in Pakistan*. Islamabad and Rome.
https://www.pdma.gov.pk/sub/uploads/Integrated%20Context%20Analysis%20(ICA)%20On%20Vulnerability%20to%20Food%20Insrity%20and%20Natural%20Hazards%20Pakistan,%202017.pdf.

4.5 Socio-economic vulnerability

Food security

24. According to the Food Insecurity Experience Scale (FIES), Balochistan has the highest rate of moderate or severe food insecurity (23.36 percent), followed by Sindh (17,52 percent), Punjab (15.66 percent) and Khyber Pakhtunkhwa (14.44 percent) (Pakistan Bureau of Statistics, 2021). Interestingly, Punjab has higher levels of severe food insecurity compared to the national average (2.29 percent) and Sindh (1.52 percent). When looking at data disaggregated by districts, all the eight districts selected for project's implementation ranked in the bottom tercile of their respective provinces, confirming their vulnerable status in terms of food security within their respective provinces (see Table 4). Moreover, the latest Integrated Food Security Phase Classification (IPC) data from May 2024 confirm that the food security situation in Sindh is critical, with all the three project districts classified as Phase 3 (IPC, 2024). No IPC data are available for Punjab.

Table 4. Moderate or severe food insecurity (FIES – %)

	Moderate or severe	Severe	Rank
Pakistan	16.44	1.80	
Punjab	15.66	2.29	
D. G. Khan	21.92	1.99	30th
Khanewal	24.86	3.65	34th
Lodhran	22.76	5.4	31st
Multan	16.88	1.63	24th
Muzaffargarh	24.86	2.85	33rd
Sindh	17.52	1.52	
Badin	28.22	3.79	26th
Sanghar	22.42	4.72	17th
Umer Kot	23.98	3.22	20th

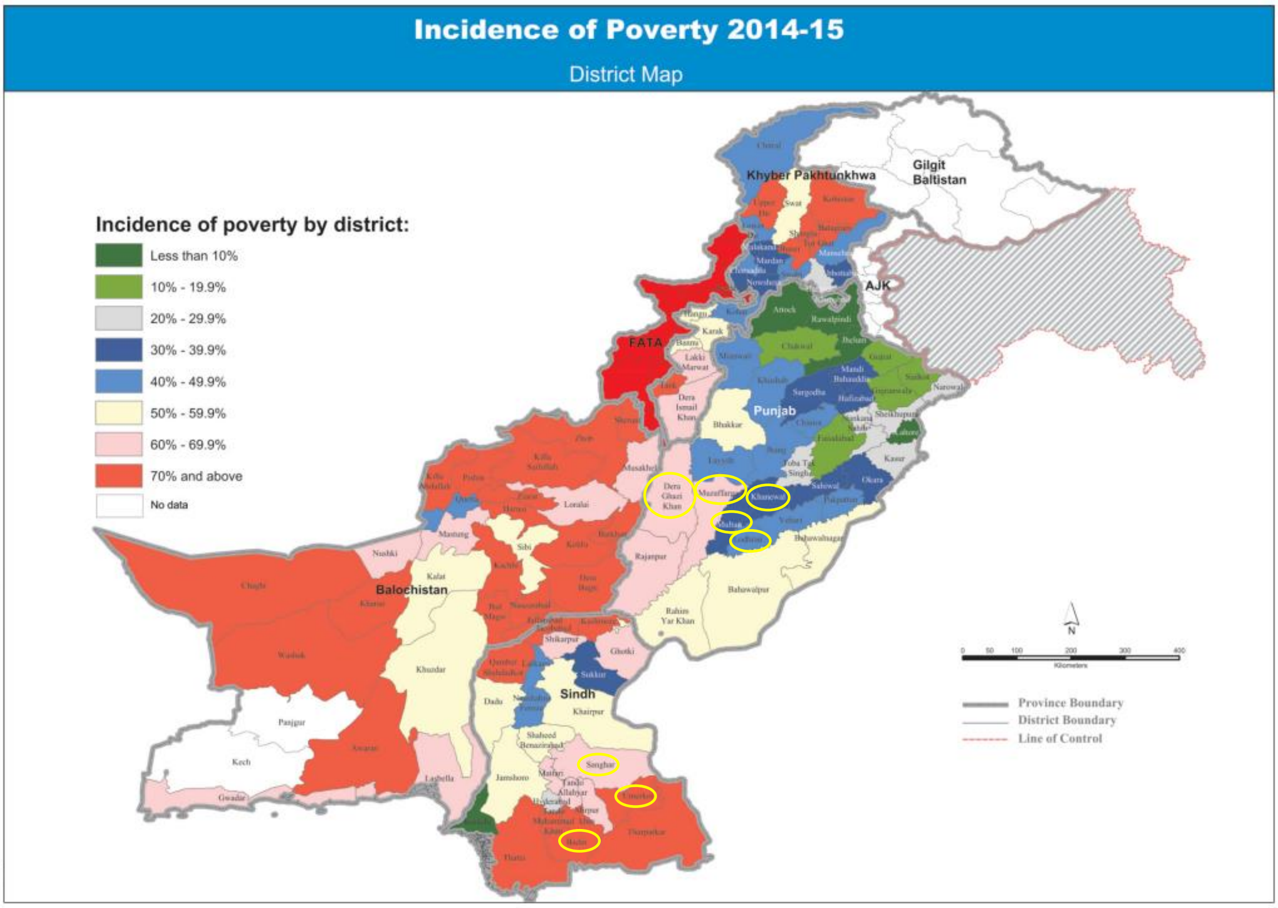
Note: 37 districts ranked in Punjab (with the inclusion of Islamabad), 29 districts ranked in Sindh. Ranking position is within the same province. Ranking is according to prevalence of moderate or severe food insecurity.
Source: Authors' own elaboration using data from Pakistan Bureau of Statistics. 2021. *District level*. Islamabad. https://www.pbs.gov.pk/sites/default/files/pslm/publications/pslm_district_2019-20/PSLM_2019_20_District_Level.pdf

Poverty rate

25. Based on the latest available Multidimensional Poverty Index's estimates (Government of Pakistan, OPHI and UNDP, 2016), the incidence of poverty in project's selected districts is overall high, ranging from 30 percent in Multan and Khanewal to 70 percent or above in Badin and Umerkot. Moreover, when compared with other districts within the same province, the project correctly targets some of the poorest areas both in terms of poverty headcount ratio[4] and in terms of intensity of poverty.[5] Indeed, Dera Ghazi Khan and Muzaffargarh score in the top four districts in Punjab for both indicators (see Appendix 8 for complete list), and Umerkot and Badin are first and third in Sindh in terms of intensity of poverty (see Appendix 9 for complete list) (Pakistan Poverty Alleviation Fund, 2018).

[4] Poverty headcount ratio measured the percentage of population living below the poverty line.
[5] Intensity of poverty measures the depth of deprivations faced by those living below the poverty line.

Figure 4. Multidimensional Poverty Index – Incidence of poverty (2014–2015)



Note: Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Project's districts highlighted in yellow by authors.
Source: Government of Pakistan, OPHI and UNDP. 2016. *Multidimensional Poverty in Pakistan*. Islamabad.

26. In conclusion, the analysis of the first stage of the MCDA confirms the vulnerability status of the selected districts to natural hazards, food insecurity and poverty. On the other hand, results for percentage of cropped area and share of smallholder farmers and agricultural households are more heterogenous, with the selected districts not necessarily ranking at the top of their provinces. Nevertheless, economy and livelihoods of all the eight targeted districts rely heavily on the agricultural sector, hence their population will undoubtedly benefit from increased resilience to climate change. The validation exercise conducted by the FAO Office of Evaluation confirms the relevance to project objectives and activities of the eight selected districts.

4.6 Union Councils

27. The second step of the MCDA is the selection of the Union Councils within identified districts. In this case, four criteria where used, namely percentage of area under irrigated and/or rainfed agriculture, and vulnerability to drought, floods and locusts (see Table 5). A higher weight is assigned to percentage of area under irrigated/rainfed agriculture (60 percent), while the other three indicators are weighted equally (13.33 percent). A vulnerability index is calculated by summing up each weighted criterion, and union councils are ranked in categories from 1 (low priority) to 3 (high priority). Results were discussed with stakeholders, and the final list of targeted Union Councils was drafted (see Appendix 10).

28. Validation of the Union Councils selection process was conducted by analyzing the databases compiled and used by the FAO Pakistan Country Office to perform the MCDA analysis according

to the methodology described in project's documents. Results were compared with the selection performed by the country office and triangulated with qualitative data collection.

Table 5. Selection criteria for Union Councils

Criteria	Source	Weight
Area under irrigated or rainfed agriculture (%)	FAO & SUPARCO (2013), land cover data	60%
Drought hazard	National Drought Monitoring Centre (Pakistan Meteorological Department), annual bulletins	13.33%
Flood hazard	MODIS & UNOSTAT (2011 and 2012)	13.33%
Locusts hazard	FAO Global Data	13.33%

Source: FAO. 2020. *Multiple Criteria Decision Analysis for selection of project Union Councils*. Rome.

Area under irrigated and/or rainfed agriculture (%)

29. By using FAO & SUPARCO (2013) land cover data, area under irrigated and rainfed agriculture as a percentage of total land is measured. Then, union councils are scored from 0 to 4 and the score is then weighted by 60 percent to contribute to the overall ranking. Nevertheless, it is not clear how this score was assigned. First, there are not consistent thresholds to assign Union Councils to different scores, with Union Councils with the same percentage of Area under irrigated/rainfed agriculture scored differently across districts or tehsils. Assuming that the ranking and scoring happened at district level as explained in the methodological guideline, the FAO Office of Evaluation team was still not able to reconstruct the same categorization by splitting Union Councils into quartiles or quintiles.[6] Similarly, the final list of prioritized areas includes Union Councils with different scores, with several cases where Union Councils with lower scores have been prioritized over Union Councils with higher scores within the same district (see Appendix 10).

Drought hazard

30. 2012–2019 Drought monitoring data at tehsil level from the Pakistan Meteorological Department have been used to estimate Union Councils drought score. The methodology adopted to estimate the score is slightly different between the two provinces, probably to adjust for Sindh being more vulnerable to droughts than Punjab.

31. For Punjab, drought hazard for each analysed year (2012–2018) is classified either as normal (value 0) or mild risk (value 1). The most severe score throughout the period analysed is then assigned as the overall score for the tehsil, and UCs within each tehsil are then scored accordingly. In Sindh, yearly drought is classified either as normal, mild, moderate and severe. In this case, the frequency of occurrence of moderate and severe droughts between 2012 and 2019 is recorded and then summed up into a single overall tehsil score, which is then assigned to its respective Union Councils. The drought score of each Union Council is then weighted by 13.3 percent. Analysis of the historical drought data performed by the FAO Office of Evaluation confirms the correct classification of Union Councils according to the methodology explained above (see Appendix 11 for list of prioritized Union Councils by drought score).

[6] The FAO Office of Evaluation team conducted several tests to try to replicate the scoring process. Union Councils have been split into quartiles and quintiles both according to the overall ranking of percentage of irrigated/rainfed area and according to a ranking within each district. None of these tests was successful in replicating the same results.

Flood hazard

32. Union Councils have been assessed against extension of flooded areas in 2011 and/or 2012 and scored from 0 to 2. The score than get weighted by 13.3 percent and summed with the other intermediate scores. Similarly to other criteria though, it is not clear how flood hazard is estimated for each year and summarized into a dummy variable with value 0 or 1, and then how the overall score is assigned to Union Councils. Indeed, the overall score is not estimated by summing up 2011 and 2012 flood hazard, since there are no Union Council in the sample where flood occurred in both years consecutively, but 68 Union Councils have a final score of 2.

Locust hazard

33. Monthly data from 2013 to 2019 monitoring the occurrence of four different locust' hazards have been used to assess Union Councils vulnerability to locusts. Union Councils are assigned 1 point for the occurrence of each locust hazards, for a total score of 4. The score than get weighted by 13.3 percent and summed with the other intermediate scores.

34. While the FAO Office of Evaluation team was able to verify the correct estimation of the overall locust scoring, it is not clear how monthly data from 2013 to 2019 has been summarized into one dummy variable taking value of either 0 or 1 for each locust type.

35. Lastly, each weighted criteria score is summed up in an overall score, which is then used to select the targeted Union Councils, though also in this case the methodology is not clear. Again, there are not consistent thresholds neither overall, nor within each district or tehsils, with several cases where the Union Councils prioritized have lower scores than others excluded (see Appendix 12). In conclusion, the FAO Office of Evaluation team recognizes that the methodology used to select targeted Union Councils builds on reliable data sources and follows a scientific approach, on the other hand such methodology has not been sufficiently documented through project's documents hence some pieces of the analysis are not replicable. Similarly, the FAO Office of Evaluation team noticed a gap in institutional knowledge, with many details on how the MCDA was developed and implemented that got lost due to staff turnover and incomplete handovers to other team members.

4.7 Villages selection

36. To select the targeted villages, FAO Pakistan Country Office held initial consultations with Union Council notables and/or government stakeholders to draft a proposed list, which was then validated through a joint review process and the selected villages profiled. Below are the criteria used for villages selection:[7]

i. village should be within one of the Union Councils identified through the MCDA analysis;
ii. village community should consent to participate and cooperate during the project cycle;
iii. minimum 25 farmers should share the same cropping system;
iv. village must have road accessibility and means of transport;
v. the selected demonstration plot sites must be easily accessible to villagers and neighbors' farmers, preferably near to roadside;
vi. farmers must consent to the use of the farm as a learning/demonstration plot for the entire duration of the project;

[7] Village selection criteria updated as of 12 August 2021.

vii. identified host farmers must have landholding more than the requirement for establishing a complete package for demonstration plot/site;

viii. all demonstration plots of one demo site should be at minimum distance, preferably adjacent to each other;

ix. learning farmers should be smallholders (less than 12 acres for Punjab and 18 acres for Sindh), vulnerable and/or low-income households; and

x. in the case of WOS establishment, the village should have smallholders, vulnerable or low-income households' family farmers in majority.

37. Information collected in the village profiling database was used to verify some of these criteria. The database includes a total of 254 villages profiled from October 2022 to July 2024, where Farmer Fiels Schools have been established or will be established in the future. The survey was administered to one representative per village, and it collects information on number of households, general socio-economic conditions of the farmers, infrastructure and most common agricultural practices. While the profiling exercise is very useful to assess how well the selected villages fit the criteria, it is not possible to verify if the project is targeting the most appropriate villages within identified Union Councils. Indeed, the aim of the exercise was to profile only the selected villages once selection was completed, hence the database does not include all the other eligible villages excluded from the project, which otherwise could have been compared with the selected ones to assess the overall relevance of the villages selection process. Moreover, not all the criteria are verifiable through the profiling database. On one hand, some information was probably already verified during the selection process and hence not recorded (e.g. presence of means of transports, demonstration plots location and accessibility, host farmers landholding requirements). On the other hand, discrepancies between some of the indicators collected (e.g. number of total households and number of households by landholding status) do not allow to verify correctly criteria such as smallholder status of farmers.

38. By using the list of prioritized Union Councils endorsed during stakeholders' consultations as reference, the analysis confirms that all the selected villages are located in one of the Union Councils identified through the MCDA analysis. Moreover, 95 percent of the villages profiled have road accessibility in both provinces, with some variations within districts. For instance, all profiled villages in Dera Ghazi Khan have road accessibility, while Multan (89 percent) and Badin (80 percent) show rates below their provincial average. On average, villages in Sindh are further away from markets (9.5 km) but closer to the nearest city (11.4 km) compared to Punjab, with respectively 6.8 km and 15 km. Around 75 percent of villages do not host any health center or have any input shop, with a slightly higher proportion in Sindh compared to Punjab.

39. In terms of land ownership status, most villages have a combination of owners and tenants, though it is interesting to highlight that Punjab has 20 percent of villages with only owners, while Sindh 9.3 percent. Nevertheless, due to discrepancies between the reported total number of households in the village and the number of households disaggregated by land holding category, it is not possible to estimate accurately the share of smallholder farmers by village.[8] Cotton-wheat (73 percent) and rice-wheat (59 percent) are the most common crop systems across districts,

[8] The questionnaire disaggregated households in four mutually exclusive categories: no agricultural land holding, less than 5 acres, between six and ten acres, and more than ten acres. In 78 percent of the profiled villages (199 out of 254), the sum of the number of households by land ownership categories does not correspond to the reported total number of households per village. Moreover, in 41 percent of the cases the sum of the disaggregated categories is higher than the total number of households per village previously reported.

though only in 87 percent of the profiled villages there are at least 25 farmers sharing the same crop system despite being a selection requirement.[9]

40. On average, 58 percent of the farmers in Punjab villages grow most of their staple food compared to 30 percent in Sindh. Moreover, 62 percent of the farmers living in Punjab villages and 52 percent of farmers living in Sindh villages practice family farming with the help of women and youth family members, and for most of the farmers living in the profiled villages agriculture and livestock revenues are the only income source of the family (61 percent in Punjab and 51 percent in Sindh). Finally, around 43 percent of the population living in the profiled villages is illiterate, 28.5 percent completed primary education and 14 percent matriculate education. These numbers suggest that most households living in the profiled areas are vulnerable and from low socioeconomic status.

41. Women engage in business activities in 38 percent of the villages and are allowed to take part in WOS activities in 46 percent of the cases, highlighting possible difficulties in the establishment of WOS considering the low access rate. Finally, when asked about willingness of farmers to allow use of land for learning activities, one fourth of the sampled villages is ranked below 5 out of 10, with one being the lowest propensity, and only around 62 percent rank 8 or above. While it is difficult to measure village community consent to participate and cooperate during the project cycle with just one question, results suggest that there might be potential difficulties in implementing activities as planned due to a possible low level of engagement in a considerable portion of the profiled villages.

42. In summary, the only criteria strictly applied is the geographic location, with profiled villages being all in one of the prioritized Union Councils. For the others, most villages are overall aligned with those criteria that was possible to verify, such as road accessibility, having at least 25 farmers sharing the same cropping system and having prevalence of vulnerable or low-income households' family farmers. On the other hand, it is not clear why villages that do not comply with easily measurable targets are included, such as those without road access or those with less than 25 farmers sharing the same cropping system. Moreover, many of the criteria are not directly verifiable as data has not been recorded in the profiling exercise, such as presence of means of transport or location of demonstration plot, or they rely on willingness of farmers to participate in the project. In conclusion, the only rule strictly applied was the geographic location within one of the prioritized Unio Councils, while the other criteria seem to have been applied more flexibly despite being critical for the correct implementation of project activities. It is too early to assess if the inclusion of some villages that formally do not comply with the criteria impacted on the effectiveness of the project, though it is something that should be analyzed in the final project evaluation.

[9] Similarly to the reported number of households by land ownership category, also in this case there are discrepancies between the total number of households and the sum of number of households by cropping system category. Indeed, in 12 percent of the profiled villages (32) the sum of the disaggregated categories is higher than the total. Nevertheless, even if we exclude these villages, there are still 31 villages (13 percent) without at least 25 farmers sharing the same cropping system.

5. Selection of beneficiaries

43. To be enrolled as a beneficiary, farmers must satisfy the following eligibility criteria:

Climate Business Field School	Women Open School	Demonstration Plots
• Be a local permanent resident of selected revenue village • Literate or illiterate • Smallholder farmer (work on less than 12 acres in Punjab and less than 18 acres in Sindh) • Preferably 20% of total beneficiaries enrolled per village have at least matriculate or above education (secondary education) • Have been practicing farming for at least the last three years • Must farm minimum 1 acre of the same cropping system covered in the CBSF • Willing to participate in yearlong CBFS • Willing to become volunteer member of the CBFS organization (to be formed during learning cycle) • Willing to consent to use his farm area for learning/demonstration purposes • Youth family members should be given preference • One member per household only • Must have active CNIC • Households getting CBFS input package will not get 10m agriculture package within the same season	• Literate or illiterate • Smallholder women family farmers • Preferably 20% of total beneficiaries enrolled per village have at least matriculate or above education (secondary education) • Preferably has backyard or farm area for Homestead Gardening • Selected sites for learning/demonstration homestead garden must be accessible to all WOS members • Willing to adopt at least one WOS enterprise from the catalogue • Youth family members should be given preference • One member per household only • Households getting WOS input package will not get 10m Agriculture package in the same season	• Preferably located in a different village than CBFS village • Literate or illiterate • Smallholder farmer (work on less than 12 acres in Punjab and less than 18 acres in Sindh) • Minimum 25 farmers of the same cropping system consent to host demonstration activities • Have been practicing farming for at least the last three years • Must have sufficient land area then the minimum required for demonstration plots • Willing to become a volunteer of CBFS Organization • One member per household • Farm must be easily accessible by road and means of transport

Source: Authors' own elaboration based on project's reports and information shared by FAO Pakistan Country Office.

44. Beneficiaries' selection relied on community-based targeting. Once the project villages are chosen, a Village Committee is formed and asked to select the most appropriate 25 farmers, which are then validated by the FAO Pakistan Country Office. While there is a list of relevant criteria to guide the selection, no categorical approach with precise indicators or cut-off thresholds to determine eligibility is adopted.

45. To assess whether the project correctly targets relevant farmers, indicators available in the baseline survey that best align with targeting criteria will be compared against other official statistics, to assess if and how the beneficiaries differ from the rest of the population. Nevertheless, it is important to mention that this quantitative analysis is partial, hence it will be triangulated and completed with results from the mid-term qualitative data collection. Indeed, because of the community-based targeting strategy adopted, some information has not been collected and recorded through a survey, such as the number of years of practicing farming or willingness to actively take part in activities, hence it is not directly verifiable. Similarly, most of the information in the baseline survey is self-reported, such as land size, number of assets owned or income, and more subject to errors. Since the baseline survey was not used for the targeting exercise, the information collected was not verified (e.g. land size measured), resulting in some of the beneficiaries not complying with eligibility criteria. While there might be cases of inclusion error, it is also likely that such discrepancies are attributable to respondents' unprecise answers or enumerators' errors.

46. Table 5 summarizes all the indicators analyzed and compared between the baseline survey and the 2019/20 Social and Living Standards Measurement Survey (Pakistan Bureau of Statistics). With the only exception of Khanewal district, the project's beneficiaries overall show higher levels of prevalence of both moderate and severe food insecurity compared to official government estimates, suggesting that the most vulnerable have been successfully prioritized for the project. Furthermore, beneficiaries' head of households show higher completion rate of secondary education when compared to the general population, in line with the targeting criteria of including at least 20 percent of total beneficiaries per village with matriculate or above education. Moreover, beneficiaries' households have higher dependency ratios in all districts, suggesting that households with higher labor constraints were selected; while the presence of members with disability does not follow any clear pattern, suggesting that it might not have been considered when selecting beneficiaries.

47. Interestingly, there is a higher percentage of landowners among the selected beneficiaries rather than the general population, which might be explained by the project requirement to be willing to use some of their land for learning activities and demonstration plots. Also, there is a higher prevalence of smallholder farmers among project beneficiaries, explained by the fact that it is one of the eligibility criteria, except for Khanewal where the district's statistics show higher prevalence compared to the sample surveyed at baseline. Finally, project's beneficiaries show higher values for the wealth index, which contrast with the vulnerability status that should characterize project's beneficiaries, though it could be explained by the in-kind inputs packages that beneficiaries received. Indeed, it is important to remember that baseline data collection was conducted after the implementation of some activities, including the distribution of an emergency agriculture input package.

	Badin		Sanghar		Umerkot		D. G. Khan		Khanewal		Lodhran		Multan		Muzaffargarh	
Indicator	**T**	**National average**	**T**	**National average**	**T**	**National average**	**T**	**National average**	**T**	**National average**	**T**	**National average**	**T**	**National average**	**T**	**National average**
Food insecurity – moderate or severe (%) [Ł]	0.70	0.32	0.37	0.26	0.47	0.27	0.39	0.23	0.03	0.27	0.23	0.21	0.31	0.19	0.29	0.27
Food insecurity – severe (%) [Ł]	0.26	0.05	0.11	0.06	0.01	0.04	0.14	0.02	0	0.04	0.05	0.06	0.02	0.02	0.07	0.03
HH head education [β] (%)	0.23	0.14	0.29	0.24	0.10	0.2	0.3	0.15	0.36	0.15	0.28	0.16	0.19	0.17	0.15	0.1
HH dependency ratio	1.84	1	2.28	1.02	2	1	2.4	1.17	1.54	0.98	1.97	0.95	1	0.95	0.89	1.20
HH with PwD (%)	0.3	0.08	0.18	0.1	0.07	0.26	0.1	0.22	0	0.17	0.03	0.1	0.07	0.13	0.5	0.15
Wealth Index [α]	0.12	0.04	0.2	0.07	0.12	0.02	0.34	0.1	0.45	0.2	0.37	0.18	0.43	0.19	0.36	0.12
Own agricultural land (%)	0.56	0.09	0.68	0.19	0.19	0.11	0.9	0.31	0.84	0.31	0.8	0.42	0.78	0.27	0.95	0.39
Smallholder farmer (%) [ʎ]	0.99	0.94	1	0.92	0.99	0.83	0.94	0.94	0.81	0.94	0.90	0.95	0.90	0.90	0.86	0.92

Table 6. Beneficiaries' selection assessment

Notes: Statistics of the beneficiaries (T=treatment group) estimated from sub-sample of 521 treatment households from the baseline survey, which include only households in the treatment group (both already treated and not yet treated) that matched with beneficiaries' list. National statistics estimated from 2019/20 Social and Living Standards Measurement Survey (Pakistan Bureau of Statistics) from a weighted statistically representative subsample of 61,009 households who live in rural areas in project implementation districts to match the population of interest.

[Ł] Food Insecurity Experience Scale (FIES) – moderate or severe.

[β] Secondary education or higher completed. Source: self-estimated from 2019/20 Social and Living Standards Measurement Survey dataset

[α] Rescaled Wealth Index estimated from durable assets owned by the household. The list of assets included in the index is not identical between the Baseline Survey and the 2019/20 Social and Living Standards Measurement Survey: mobile phone has been replaced by radio and pc by lcd/led.

[ʎ] Land size measurements might differ slightly due to differences in question formulation between the baseline survey and the 2019/20 Social and Living Standards Measurement Survey. In the baseline survey, land size indicates actual agricultural land used. In the 2019/20 Social and Living Standards Measurement Survey, land size indicates the total agricultural land owned and/or rented, without specifying if actually used.

Source: Authors' own elaboration.

48. In conclusion, results from the baseline survey triangulated with secondary data sources confirms the overall alignment of the beneficiaries selected with the targeting criteria, and to some extent the relevance of the beneficiaries selected compared to the general population. Nevertheless, to improve beneficiaries' targeting in the next phase of the project, it is recommended to adopt a categorical-targeting approach together with the community-targeting method. This implies converting the eligibility criteria into measurable indicators and collecting the required information to measure them for the entire village. Once the village's eligible population is identified, the Village Committee selects the most appropriate 25 farmers through community-based targeting. If such targeting strategy is deemed unfeasible due to financial and timing constraints, at least beneficiary farmers should be profiled, and their eligibility recorded and demonstrated through measurable indicators.

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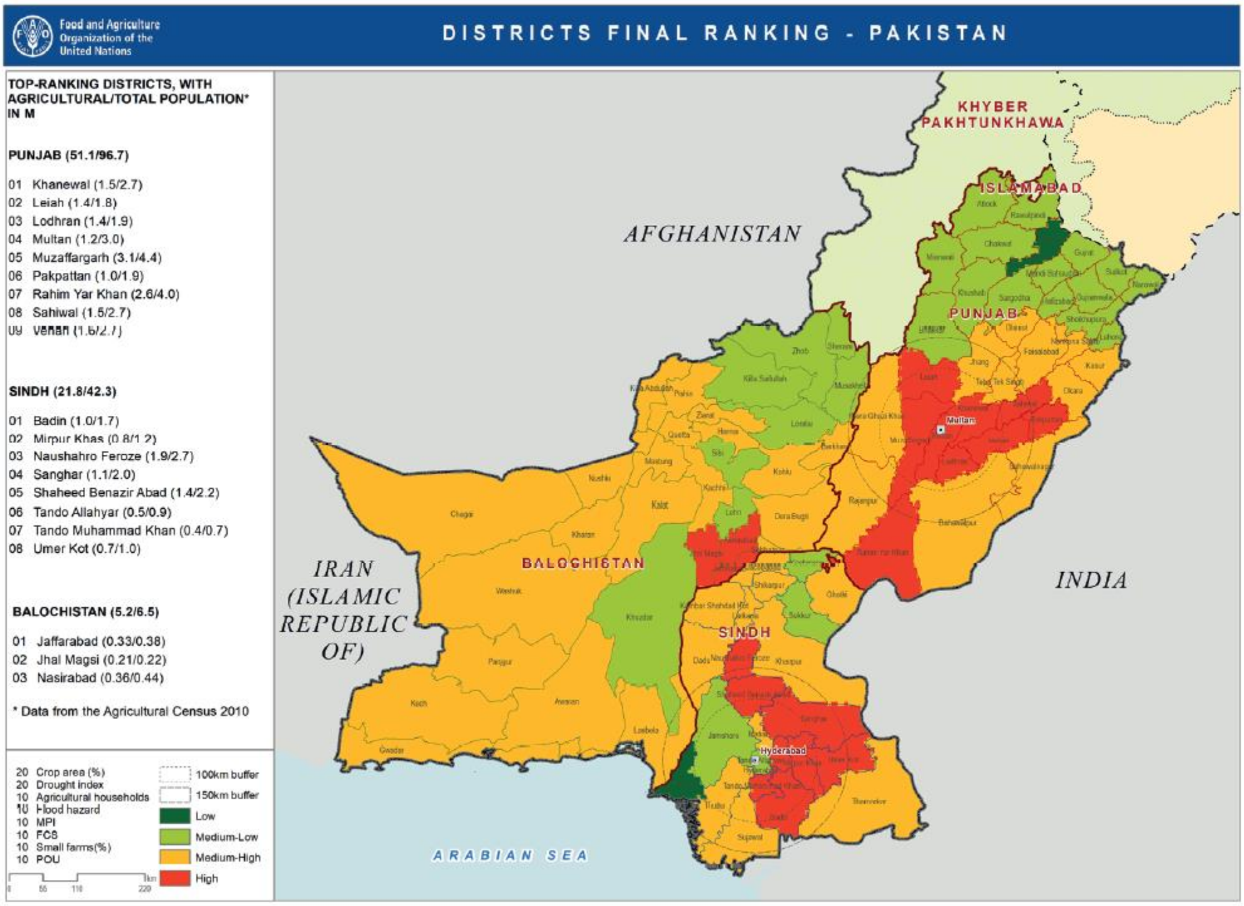
Appendix 1. Districts selection analysis – final ranking



Note: Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

Source: FAO. 2020. *Multi-Criteria decision analysis for selection of vulnerable districts: Transforming Indus Basin with climate resilient agriculture and water management. Islamabad*. Rome.

Appendix 2. Cropped areas by districts (% of total land cover) – Punjab

District	Irrigated area (%)	Marginal and irrigated saline (%)	Flood plain (%)	Rainfed area (%)	Total cropped area (% of total)	Rank
Lodhran	93	0.8	0.5	0	94.3	1
Pakpattan	92.7	0.3	1	0	94	2
Vehari	93	0.3	0.4	0	93.7	3
Nankana Sahib	87.3	2.9	2.6	0	92.8	4
Hafizabad	89.2	1.5	1.3	0	92	5
Okara	89	1.1	1.9	0	92	6
Narowal	82.5	0.2	9	0	91.7	7
Sheikhupura	87.2	2.2	0.6	0	90	8
Gujranwala	88.7	0.2	1	0	89.9	9
Sahiwal	88.1	0.8	0.9	0	89.8	10
Sialkot	87.9	0	1.2	0	89.1	11
Kasur	86.4	0.5	1.8	0	88.7	12
Chiniot	82.3	0.3	5.7	0	88.3	13
Faisalabad	85.8	2	0.4	0	88.2	14
Khanewal	84.9	0.6	2.1	0	87.6	15
Toba Tek Singh	84.4	0.4	0.8	0	85.6	16
Mandi Bahauddin	83	0.1	2.3	0	85.4	17
Multan	75.9	0.6	2.9	0	79.4	18
Gujrat	66.5	0	1.8	8.8	77.1	19
Jhang	68.5	0.7	4.6	0	73.8	20
Bahawalnagar	66	1	1.7	3.8	72.5	21
Sargodha	68.8	1.2	1.5	0	71.5	22
Muzaffargarh	56.8	0.7	10.5	0	68	23
Lahore	59.9	1.6	0.3	0	61.8	24
Attock	0	0	0.1	60.6	60.7	25
Chakwal	0	0	0	58.2	58.2	26
Mianwali	35.8	0	5.2	13.2	54.2	27
Layyah	47.5	0	6.3	0	53.8	28
Rahim Yar Khan	46.7	0.9	4	0	51.6	29
Rawalpindi	0	0	0	51	51	30
Jhelum	5.2	1	2.3	38.2	46.7	31
D. G. Khan	22.4	0.3	3.2	15.2	41.1	32
Rajanpur	21.8	0.2	7	10.8	39.8	33
Bhakkar	38.5	0	1.2	0	39.7	34
Khushab	22	0.4	1.3	11	34.7	35
Bahawalpur	21.4	0	0.2	0	21.6	36

Source: Authors' own elaboration using data extracted from FAO and SUPARCO. 2014. *Land Cover Atlas of Pakistan. The Sindh Province.* Rome.

Appenidx 3. Cropped areas by districts (% of total land cover) – Sindh

District	Irrigated area (%)	Marginal and irrigated saline (%)	Flood plain (%)	Rainfed area (%)	Total cropped area (% of total)	Rank
Jacobabad	68	19.8	0	0	87.8	1st
Tando Muhammad Khan	76.9	7.4	1.4	0	85.7	2nd
Badin	68.9	13.2	0	0	82.1	3rd
Mirpurkhas	69.2	12.8	0	0	82	4th
Tando Allahyar	72.2	6.2	0	0	78.4	5th
Shikarpur	65.3	5.1	7.2	0	77.6	6th
Naushahro Feroze	54.6	8.3	14.5	0	77.4	7th
Matiari	56.9	2.3	17.9	0	77.1	8th
Larkana	55.1	5.6	12.3	0	73	9th
Kashmore	52.1	7.7	12.5	0	72.3	10th
Shaheed Benazirabad	49.9	6	8.5	0	64.4	11th
Hyderabad	49.7	3.5	4.8	0.3	58.3	12th
Qamber Shahdadkot	42.1	10.4	0	4.7	57.2	13th
Umer Kot	31.5	21.4	0	0	52.9	14th
Dadu	26.7	3.4	3.5	14.1	47.7	15th
Ghotki	38.8	5	3	0	46.8	16th
Tharparkar	0.5	40.1	0	3.8	44.4	17th
Sanghar	36.8	5.3	0	0	42.1	18th
Sukkur	20.5	4.5	7.4	0	32.4	19th
Thatta	19.6	3.7	2.7	2.2	28.2	20th
Khairpur	14.8	1.4	2.6	0	18.8	21st
Jamshoro	3.1	0.5	3.2	7.4	14.2	22nd
Malir	7.4	0	0	4.7	12.1	23rd
Karachi	6.5	0	0	4.4	10.9	24th

Source: Authors' own elaboration using data extracted from FAO and SUPARCO. 2014. *Land Cover Atlas of Pakistan. The Sindh Province.* Rome.

Appendix 4. Smallholder farmers and agricultural households by districts – Punjab

	Smallholder farms			Agricultural households			
District	**N. of farms**	**%**	**Rank**	**Total**	**Agricultural households**	**%**	**Rank**
Cholistan	2 557	18	38th	20 161	17 723	88	1st
Bhakkar	96 212	42	37th	336 484	271 796	81	2nd
Rajanpur	88 059	69	10th	207 434	162 346	78	3rd
D.G. Khan	120 936	63	24th	323 345	248 722	77	4th
Layyah	80 360	50	32nd	274 774	208 213	76	5th
Lodhran	80 863	67	13th	288 513	200 107	69	6th
Khushab	93 870	54	31st	344 484	235 654	68	7th
Attock	93 701	64	19th	260 586	170 691	66	8th
Narowal	76 926	76	6th	192 249	125 417	65	9th
Muzaffargarh	205 366	70	8th	618 510	398 304	64	10th
Chakwal	98 623	65	16th	291 738	181 833	62	11th
Rahim Yar Khan	156 440	68	12th	573 693	341 161	59	12th
Nankana Sahib	68 174	62	25th	249 835	148 150	59	13th
Bahawalnagar	79 443	48	34th	425 665	250 127	59	14th
Jhang	115 332	64	20th	464 873	271 895	58	15th
Bahawalpur	79 443	48	33rd	429 691	246 645	57	16th
Vehari	112 601	69	9th	441 612	252 963	57	17th
Mianwali	100 266	66	15th	370 799	205 702	55	18th
Chiniot	61 541	64	21st	313 418	171 919	55	19th
Mandi Bahauddin	47 614	54	29th	235 206	127 242	54	20th
Khanewal	90 018	67	14th	396 406	209 880	53	21st
Gujarat	122 007	81	3rd	332 795	174 566	52	22nd
Sahiwal	88 900	68	11th	409 572	214 241	52	23rd
Toba Tek Singh	59 801	62	26th	282 895	147 163	52	24th
Hafizabad	23 253	44	36th	164 883	84 385	51	25th
Sargodha	88 136	45	35th	600 538	306 147	51	26th
Jhelum	54 202	78	5th	162 529	80 943	50	27th
Kasur	110 053	65	17th	488 615	234 833	48	28th
Pakpattan	66 419	63	23rd	329 627	156 488	47	29th
Okara	66 425	54	30th	434 648	189 372	44	30th
Sialkot	130 036	80	4th	471 863	196 207	42	31st
Rawalpindi	155 792	85	2nd	491 998	198 733	40	32nd
Multan	74 685	70	7th	464 972	169 348	36	33rd
Sheikhupura	40 207	63	22nd	242 745	82 813	34	34th
Islamabad	29 240	89	1st	122 287	38 723	32	35th
Faisalabad	139 029	65	18th	959 835	293 543	31	36th
Gujatanwala	66 549	58	28th	643 510	170 613	27	37th
Lahore	36 313	60	27th	993 775	102 810	10	38th

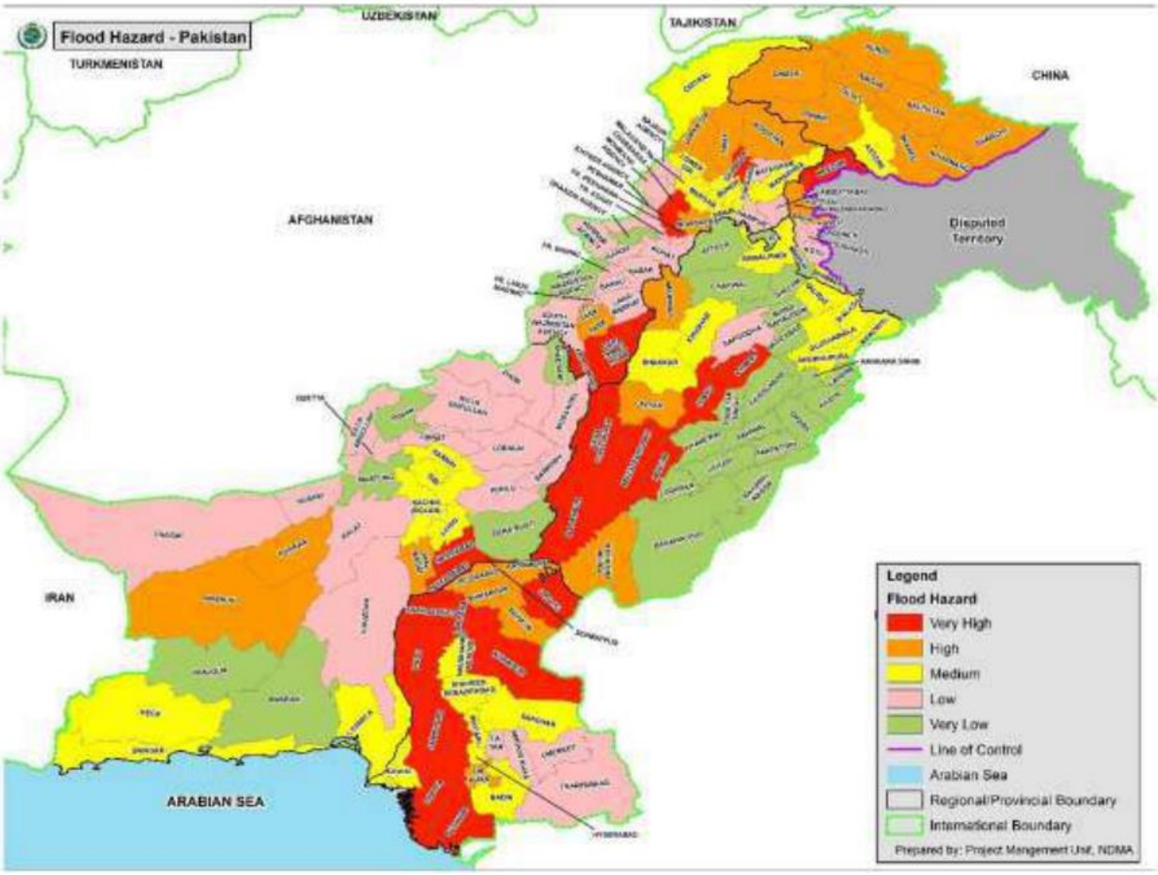
Source: Authors' own elaboration using Pakistan Bureau of Statistics. 2010. *2010 Agricultural Census*. Islamabad. https://www.pbs.gov.pk/sites/default/files/agriculture/publications/agricultural_census2010/WRITE-UP%20AGRI.%20CENSUS%202010.pdf

Appendix 5. Smallholder farmers and agricultural households by districts – Sindh

	Smallholder farms			Agricultural households			
District	**N. of farms**	**%**	**Rank**	**Total**	**Agricultural households**	**%**	**Rank**
Shahdadkot	36 935	92	3rd	96 678	74 888	77	1st
Umerkot	76 949	85	11th	163 032	123 472	76	2nd
Khairpur	116 374	95	1st	428 226	316 672	74	3rd
Kashmore at Kandhkot	16 686	73	17th	125 513	87 095	69	4th
Dadu	52 434	91	4th	244 722	164 434	67	5th
Nawabshah	31 385	69	20th	222 577	148 856	67	6th
Thatta	29 549	70	18th	250 739	166 586	66	7th
Tharparkar	24 383	69	19th	185 557	120 886	65	8th
Mirpur Khas	59 318	80	14th	182 682	117 536	64	9th
Ghotki	85 297	90	5th	254 833	162 041	64	10th
Larkana	38 768	93	2nd	113 830	71 023	62	11th
Naushero Feroz	78 283	90	6th	352 516	206 786	59	12th
Badin	48 720	67	21st	260 972	152 742	59	13th
Jaccobabad	28 916	86	9th	130 585	75 699	58	14th
Tando Muhammad	12 075	81	13th	103 291	57 907	56	15tht
Shikarpur	28 101	86	8th	137 586	74 548	54	16h
Sanghar	54 670	75	16th	296 147	143 760	49	17th
Tando Allahyar	25 228	75	15th	133 203	61 511	46	18th
Matiari	14 362	81	12th	84 079	38 387	46	19th
Sukkur	32 740	88	7th	204 411	92 748	45	20th
Jamshoro	22 919	85	10th	129 251	42 655	33	21st
Hyderabad	10 956	65	22nd	261 342	63 378	24	22nd
Karachi	1 824	64	23rd	1 273 388	16 112	1	23rd

Source: Authors' own elaboration using Pakistan Bureau of Statistics. 2010. *2010 Agricultural Census*. Islamabad. https://www.pbs.gov.pk/sites/default/files/agriculture/publications/agricultural_census2010/WRITE-UP%20AGRI.%20CENSUS%202010.pdf

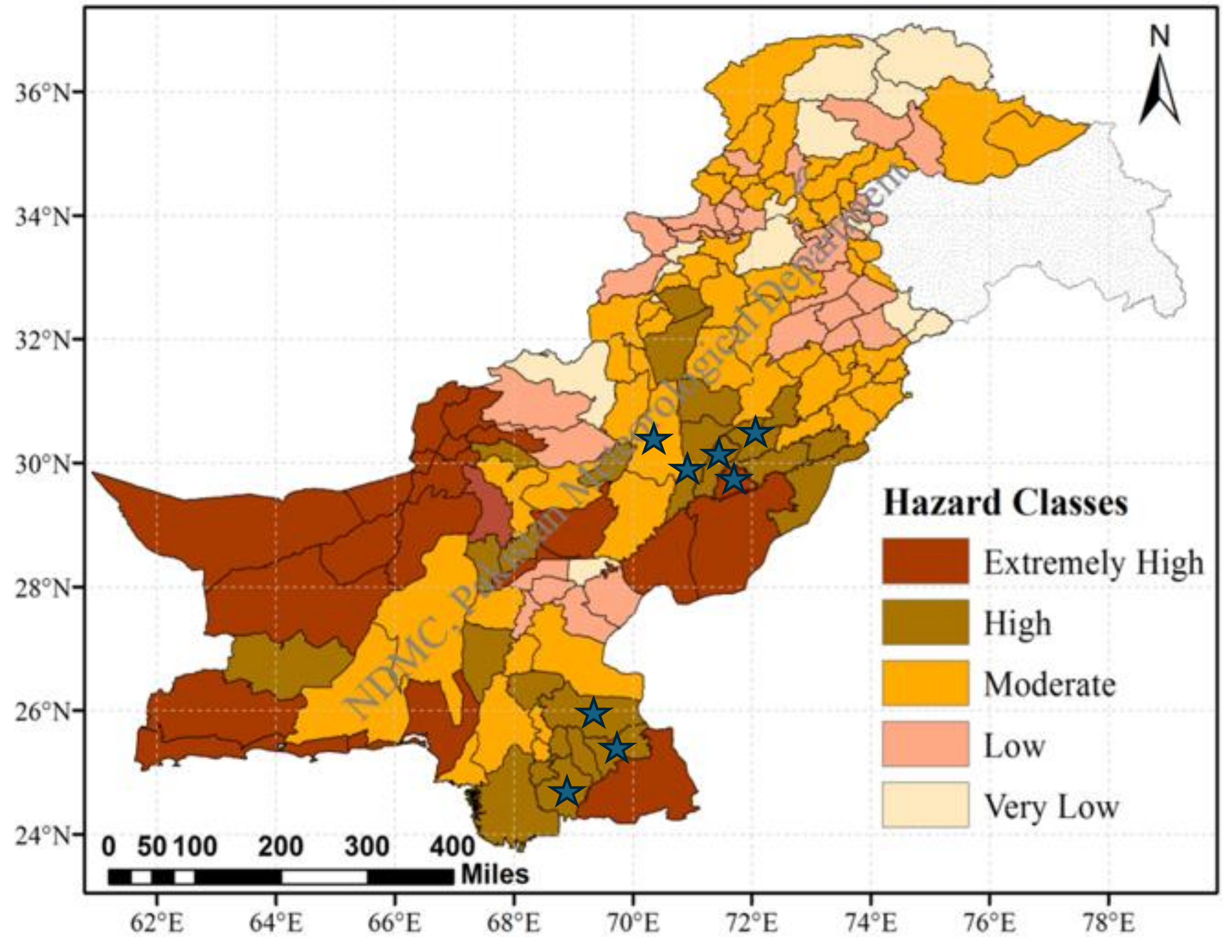
Appendix 6. Flood hazard map of Pakistan



Note: Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

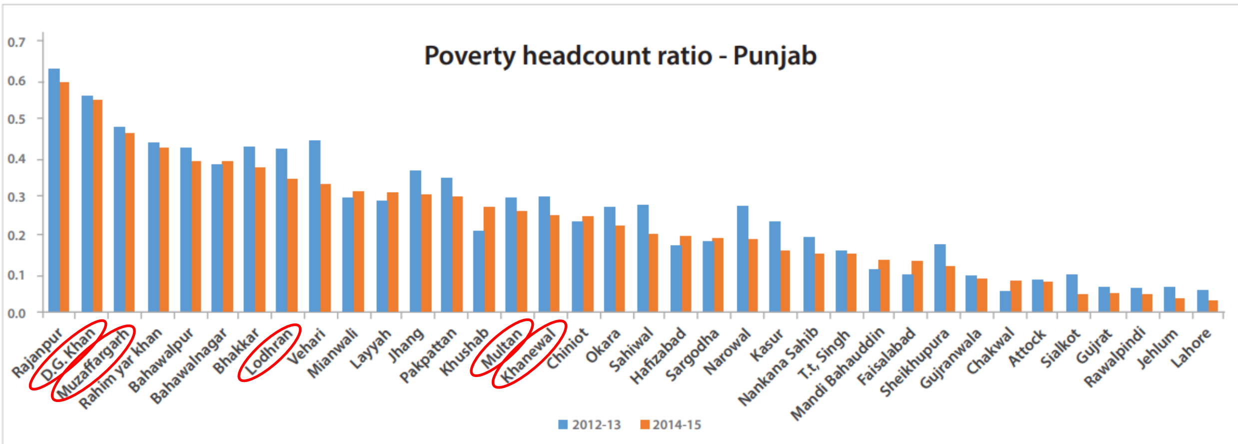
Source: NDMA. 2019. *National Disaster Response Plan 2019*. Islamabad. https://www.ndma.gov.pk/storage/publications/July2024/LseuKlsxiAtQoUyCY5Ph.pdf

Appendix 7. Drought hazard map of Pakistan

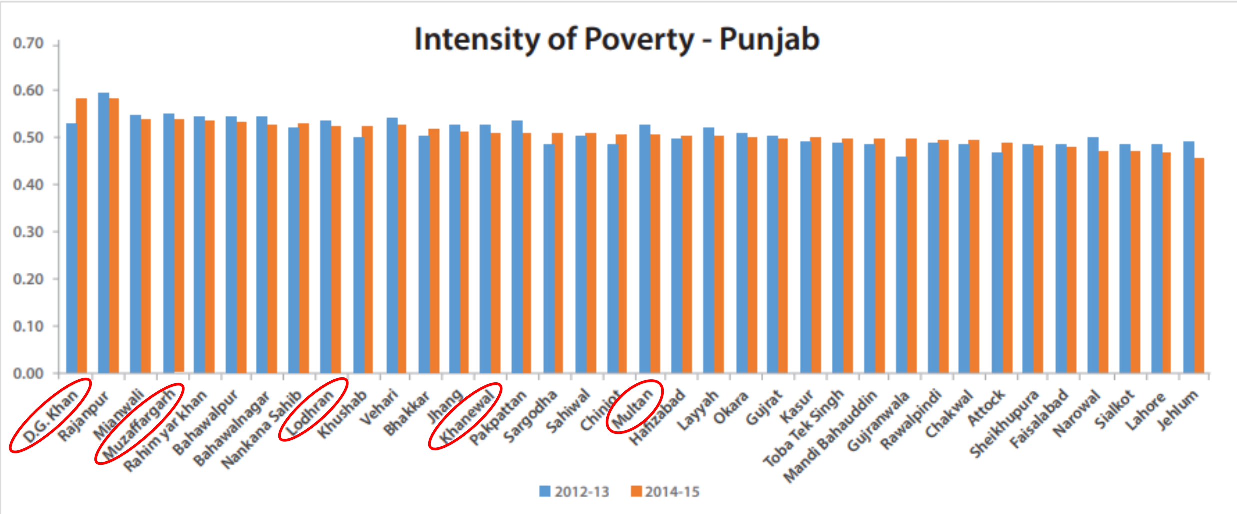


Note: Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Districts included in the project indicated with blue stars. *Source*: Pakistan Meteorological Department. 2023. National Drought Monitoring & Early Warning Centre Updates as of 25 October 2023. In: *NDMC*. [Cited 25 October 2023]. https://ndmc.pmd.gov.pk/new/outlooks.php?p=drought-hazard-map

Appendix 8. Punjab poverty headcount ratio and intensity of poverty by districts

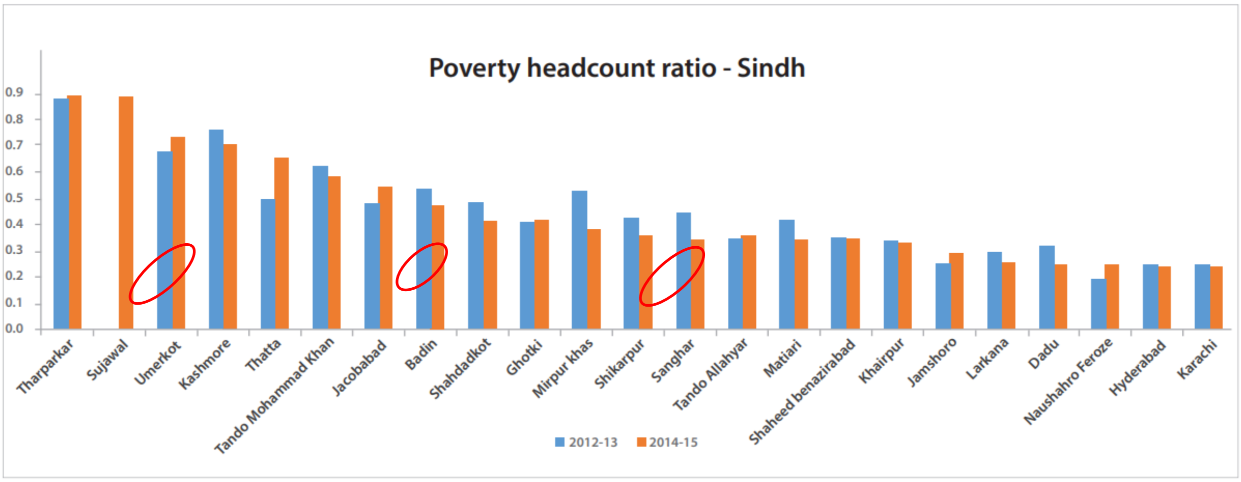


Note: Project's districts highlighted in red by authors.
Source: Pakistan Poverty Alleviation Fund. 2018. *Geography of poverty in Pakistan: Update – Multidimensional poverty in Pakistan at the National, Provincial and District levels, 2014-15*. Islamabad. https://www.ppaf.org.pk/doc/regional/7-Geography%20of%20Poverty%20in%20Pakistan_UPDATE.pdf

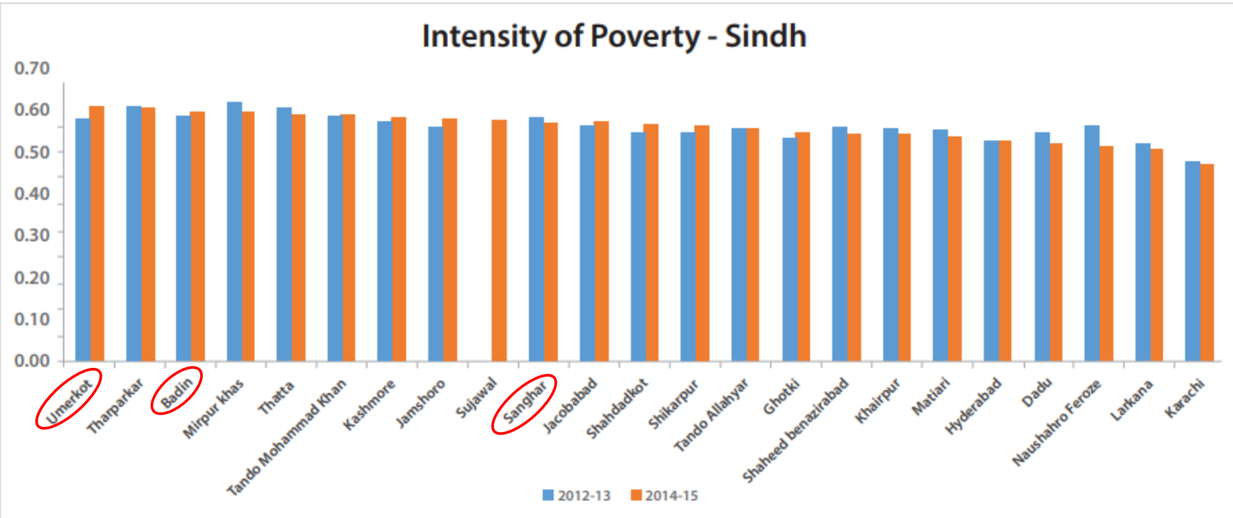


Note: project's districts highlighted in red by authors.
Source: Pakistan Poverty Alleviation Fund. 2018. *Geography of poverty in Pakistan: Update – Multidimensional poverty in Pakistan at the National, Provincial and District levels, 2014-15*. Islamabad. https://www.ppaf.org.pk/doc/regional/7-Geography%20of%20Poverty%20in%20Pakistan_UPDATE.pdf

Appendix 9. Sindh poverty headcount ratio and intensity of poverty by districts



Note: project's districts highlighted in red by authors.
Source: Pakistan Poverty Alleviation Fund. 2018. *Geography of poverty in Pakistan: Update – Multidimensional poverty in Pakistan at the National, Provincial and District levels, 2014-15*. Islamabad. https://www.ppaf.org.pk/doc/regional/7-Geography%20of%20Poverty%20in%20Pakistan_UPDATE.pdf



Note: project's districts highlighted in red by authors.
Source: Pakistan Poverty Alleviation Fund. 2018. *Geography of poverty in Pakistan: Update – Multidimensional poverty in Pakistan at the National, Provincial and District levels, 2014-15*. Islamabad. https://www.ppaf.org.pk/doc/regional/7-Geography%20of%20Poverty%20in%20Pakistan_UPDATE.pdf

Appendix 10. Area under irrigated/rainfed agriculture (%) and score by prioritized Union Councils

Province	Districts	Tehsils	Union Councils	Irrigated/rainfed agriculture (%)	Score
SINDH	Badin	MATLI	HALIOTA	76.21102586	4
SINDH	Badin	SHAHEED FAZIL RAHU	KARIO GHANOR	77.1487722	4
SINDH	Badin	TANDO BAGO	KHALIFA QASIM	78.26788684	4
SINDH	Badin	BADIN	NANDU	82.01837221	4
SINDH	Badin	BADIN	BADIN 1	82.89804462	4
SINDH	Badin	MATLI	TANDO GHULAM ALI	82.99807494	4
SINDH	Badin	SHAHEED FAZIL RAHU	SHAHEED FAZIL RAHU	83.39757969	4
SINDH	Badin	TALHAR	SAEEDPUR	86.2919818	4
SINDH	Badin	TANDO BAGO	KHADHARO	92.72361774	4
SINDH	Badin	SHAHEED FAZIL RAHU	RAHOKI	93.19031183	4
PUNJAB	DGKHAN	TAUNSA	MANGROTHA	54.05741474	3
PUNJAB	DGKHAN	TAUNSA	HAIRO SHARQI	57.44113115	3
PUNJAB	DGKHAN	TAUNSA	FATEH KHAN	69.05611439	3
PUNJAB	DGKHAN	DERA GHAZI KHAN	KALA	70.92134054	3
PUNJAB	DGKHAN	DERA GHAZI KHAN	DARKHWAST JAMAL KHAN	71.97281544	3
PUNJAB	DGKHAN	TAUNSA	JALU WALI	75.21598834	4
PUNJAB	DGKHAN	TAUNSA	KOT QAISRANI	77.25212644	4
PUNJAB	DGKHAN	TAUNSA	MORJHANGI	78.62946428	4
PUNJAB	DGKHAN	TAUNSA	VEHO WA	78.89780451	4
PUNJAB	DGKHAN	DERA GHAZI KHAN	PAIGAH	79.41337845	4
PUNJAB	DGKHAN	TAUNSA	TIBBI QAISRANI	85.30308432	4
PUNJAB	DGKHAN	DERA GHAZI KHAN	KHAKHI	87.2836884	4
PUNJAB	DGKHAN	DERA GHAZI KHAN	MANA AHMADANI	88.4366012	4
PUNJAB	DGKHAN	DERA GHAZI KHAN	CHABRI	88.46887816	4
PUNJAB	DGKHAN	DERA GHAZI KHAN	BASTI MALANA	89.63119547	4
PUNJAB	DGKHAN	DERA GHAZI KHAN	PIR ADIL	94.49773394	4
PUNJAB	DGKHAN	DERA GHAZI KHAN	ALI WALA	96.47597579	4
PUNJAB	DGKHAN	DERA GHAZI KHAN	NOTAK MEHMEED	96.75358627	4
PUNJAB	DGKHAN	DERA GHAZI KHAN	KOT CHATTA	97.51339976	4
PUNJAB	DGKHAN	DERA GHAZI KHAN	KOT HAIBAT	97.85769792	4
PUNJAB	DGKHAN	DERA GHAZI KHAN	JHOK UTRA	99.27915145	4
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 43/10-R	87.3439449	2
PUNJAB	KHANEWAL	JAHANIAN	MIAN PUR	90.41779152	3
PUNJAB	KHANEWAL	JAHANIAN	THATHA SADIQ ABAD	91.4333661	3
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 171/10R	91.55753447	3
PUNJAB	KHANEWAL	JAHANIAN	RAHIM SHAH	91.6387868	3
PUNJAB	KHANEWAL	KABIRWALA	CHAK HYDERABAD	91.77883828	3
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 124/15L	92.50697034	3
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 61-A/15-L	92.57167495	3
PUNJAB	KHANEWAL	KABIRWALA	HABU KANWAIN	92.6064836	3
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 74/15L	92.88492605	3
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 100/15L	92.95393521	3
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 70/10-R	93.27557017	3
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 4/AH	93.62269173	3
PUNJAB	KHANEWAL	JAHANIAN	CHAK NO. 136/10-R	94.12108576	3
PUNJAB	KHANEWAL	JAHANIAN	CHAK NO. 127/10R	94.49159746	3
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 36/10R	94.65522413	3
PUNJAB	KHANEWAL	KABIRWALA	HUSSAIN ABAD	95.57256974	3
PUNJAB	KHANEWAL	KABIRWALA	DAR KHANA	95.59371017	3
PUNJAB	KHANEWAL	KABIRWALA	MAHNI SIAL	96.1921916	3
PUNJAB	KHANEWAL	KABIRWALA	KOT BAHADUR	96.230586	3
PUNJAB	LODHRAN	LODHRAN	CHAMB KALYAR	89.33285365	2
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. WB-386	91.69872546	2
PUNJAB	LODHRAN	DUNYAPUR	QUTAB PUR	92.76976762	2
PUNJAB	LODHRAN	LODHRAN	SAAD ULLAH PUR	93.84309158	2
PUNJAB	LODHRAN	DUNYAPUR	MAKHDOOM AALI	95.12700075	3

Appendix 10. Area under irrigated/rainfed agriculture (%) and score by prioritized Union Councils

Province	Districts	Tehsils	Union Councils	Irrigated/rainfed agriculture (%)	Score
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. WB-357	95.31607926	3
PUNJAB	LODHRAN	KAHROR PACCA	CHOWKI MASTI KHAN	95.32107618	3
PUNJAB	LODHRAN	LODHRAN	BHOOTIJI	95.51224881	3
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. M-35	95.65012855	3
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. WB-342	96.06679952	3
PUNJAB	LODHRAN	DUNYAPUR	SULTAN AYUB QATAL	96.08577119	3
PUNJAB	LODHRAN	LODHRAN	DERA JAND	96.82959049	3
PUNJAB	LODHRAN	KAHROR PACCA	BAHAWAL GARH	97.16436031	3
PUNJAB	LODHRAN	LODHRAN	KHANWAH GAHLWAN	97.74364361	3
PUNJAB	LODHRAN	LODHRAN	DORAN WALA	97.93881833	3
PUNJAB	LODHRAN	KAHROR PACCA	BURHAN PUR	97.95333288	3
PUNJAB	LODHRAN	KAHROR PACCA	RAPPER	98.25195196	3
PUNJAB	LODHRAN	KAHROR PACCA	AMEER PUR SADDAT	98.4482722	3
PUNJAB	LODHRAN	KAHROR PACCA	NASIR UD DIN WAHIN	98.67999667	3
PUNJAB	LODHRAN	LODHRAN	QURESHI WALA	98.85073644	3
PUNJAB	MULTAN	MULTAN SADDAR	KHOKHAR	66.16091482	3
PUNJAB	MULTAN	JALALPUR PIRWALA	ALI PUR SADAT	73.84876949	3
PUNJAB	MULTAN	SHUJABAD	JALAL PUR KHAKHI	79.36944908	4
PUNJAB	MULTAN	JALALPUR PIRWALA	NAURAJA BHATA	80.5969052	4
PUNJAB	MULTAN	SHUJABAD	RAJA RAM	88.38048278	4
PUNJAB	MULTAN	JALALPUR PIRWALA	MIAN PUR BAILAY WALA	90.41990996	4
PUNJAB	MULTAN	JALALPUR PIRWALA	KOTLA CHAKAR	90.78937607	4
PUNJAB	MULTAN	SHUJABAD	MATOTLI	92.52810636	4
PUNJAB	MULTAN	MULTAN SADDAR	CHAK NO. 18/M.R	93.09173619	4
PUNJAB	MULTAN	MULTAN SADDAR	GHARIALA	93.63667535	4
PUNJAB	MULTAN	MULTAN SADDAR	KABIR PUR	93.67277561	4
PUNJAB	MULTAN	SHUJABAD	KOTLI NAJABAT	93.99808528	4
PUNJAB	MULTAN	MULTAN SADDAR	KOTLA MEHARAN	94.62554951	4
PUNJAB	MULTAN	MULTAN SADDAR	CHAK NO. 5 FAIZ	96.83816565	4
PUNJAB	MULTAN	MULTAN SADDAR	BOTEWALA	97.06441045	4
PUNJAB	MULTAN	SHUJABAD	RASUL PUR	97.27628456	4
PUNJAB	MULTAN	MULTAN SADDAR	LAR	97.64885744	4
PUNJAB	MULTAN	JALALPUR PIRWALA	BAHADUR PUR	97.72218969	4
PUNJAB	MULTAN	MULTAN SADDAR	MAKHDOOM RASHID TOWN	97.85515936	4
PUNJAB	MULTAN	MULTAN SADDAR	BASTI MALOK	99.35256732	4
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	ROHELAN WALI	37.65420166	2
PUNJAB	MUZAFFARGARH	KOT ADDU	WANDAR	41.22474067	2
PUNJAB	MUZAFFARGARH	ALIPUR	ALI WALI	55.09908019	3
PUNJAB	MUZAFFARGARH	KOT ADDU	PATTAL MUNDA	55.45803037	3
PUNJAB	MUZAFFARGARH	KOT ADDU	THATHA GURMANI	57.06390421	3
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	GUL WALA	67.31434746	3
PUNJAB	MUZAFFARGARH	KOT ADDU	DOGAR KALAMRA	69.22498968	3
PUNJAB	MUZAFFARGARH	KOT ADDU	PATTI GHULAM ALI	73.68949056	3
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	SHARIF CHAJRA	80.72223479	4
PUNJAB	MUZAFFARGARH	KOT ADDU	MINHAN	81.49950263	4
PUNJAB	MUZAFFARGARH	ALIPUR	BET MULLAN WALI	83.47314465	4
PUNJAB	MUZAFFARGARH	KOT ADDU	SHADI KHAN MUNDA	83.49526497	4
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	WAN PATAFI	85.80090592	4
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	SHAH JAMAL	86.27584824	4
PUNJAB	MUZAFFARGARH	JATOI	BELAWALA	87.50914539	4
PUNJAB	MUZAFFARGARH	ALIPUR	KHIAR PUR SADAT	88.05791528	4

Province	Districts	Tehsils	Union Councils	Irrigated/rainfed agriculture (%)	Score
PUNJAB	MUZAFFARGARH	ALIPUR	YAKE WALI	90.05054901	4
PUNJAB	MUZAFFARGARH	KOT ADDU	SINAWAN	91.05772636	4
PUNJAB	MUZAFFARGARH	JATOI	VENUS	96.34465204	4
PUNJAB	MUZAFFARGARH	JATOI	KOTLA GAUN	98.05128631	4
SINDH	SANGHAR	KHIPRO	DHALIYAR	75.70771299	4
SINDH	SANGHAR	SANGHAR	MIAN	75.79077797	4
SINDH	SANGHAR	TANDO ADAM	MIR HASSAN MURREE	76.50465221	4
SINDH	SANGHAR	SHAHDADPUR	MALASI	78.24877603	4
SINDH	SANGHAR	SINJHORO	JHOL	81.03310904	4
SINDH	SANGHAR	SHAHDADPUR	JATIA	81.74454735	4
SINDH	SANGHAR	JAM NAWAZ ALI	BEERANI	81.77744386	4
SINDH	SANGHAR	SINJHORO	JAFFAR KHAN LAGHARI	81.80862856	4
SINDH	SANGHAR	TANDO ADAM	MANIK THAHIM	90.58802655	4
SINDH	UMERKOT	UMER KOT	SABHO	51.78575491	3
SINDH	UMERKOT	SAMARO	SATARYOON	75.49519528	4
SINDH	UMERKOT	KUNRI	SHER KHAN CHANDIO	81.36662716	4
SINDH	UMERKOT	UMER KOT	ATTA MUHAMMAD PALI	82.56394834	4
SINDH	UMERKOT	KUNRI	BASTAN	83.5679505	4
SINDH	UMERKOT	SAMARO	PADHRIO FARM	84.83891421	4
SINDH	UMERKOT	PITHORO	SHAH MARDAN SHAH	86.48922833	4
SINDH	UMERKOT	SAMARO	SAMARO ROAD	87.46730053	4
SINDH	UMERKOT	UMER KOT	DHORONADO	89.82826309	4
SINDH	UMERKOT	KUNRI	KUNRI	91.97929018	4

Note: Due to different spellings, the names of UCs in the database used for analysis do not coincide exactly with the names included in the endorsed list. Authors did their best to reconcile the different data sources and select the correct UCs, though it was not possible to identify Matwal (Dera Ghazi Khan) and Kahorr (Sanghar).
Source: Authors' own elaboration from analysis of project's documents and database used to conduct MCDA for UCs selection.

Appendix 11. Prioritized Union Councils by drought hazard score

Province	Districts	Tehsils	UC	2012	2013	2014	2015	2016	2017	2018	2019	Mild	Mod.	Sevv	Mod_Sev	Drought score
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	ALI WALA	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	BASTI MALANA	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	CHABRI	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	DARKHWAST JAMAL KHAN	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	JHOK UTRA	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	KALA	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	KHAKHI	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	KOT CHATTA	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	KOT HAIBAT	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	MANA AHMADANI	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	NOTAK MEHMEED	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	PAIGAH	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	PIR ADIL	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	DERA GHAZI KHAN	TAUNSA	FATEH KHAN	Normal	Normal	Normal	Normal	Normal	Mild	Normal		1	0	0	0	1
PUNJAB	DERA GHAZI KHAN	TAUNSA	HAIRO SHARQI	Normal	Normal	Normal	Normal	Normal	Mild	Normal		1	0	0	0	1
PUNJAB	DERA GHAZI KHAN	TAUNSA	JALU WALI	Normal	Normal	Normal	Normal	Normal	Mild	Normal		1	0	0	0	1
PUNJAB	DERA GHAZI KHAN	TAUNSA	KOT QAISRANI	Normal	Normal	Normal	Normal	Normal	Mild	Normal		1	0	0	0	1
PUNJAB	DERA GHAZI KHAN	TAUNSA	MANGROTHA	Normal	Normal	Normal	Normal	Normal	Mild	Normal		1	0	0	0	1
PUNJAB	DERA GHAZI KHAN	TAUNSA	MORJHANGI	Normal	Normal	Normal	Normal	Normal	Mild	Normal		1	0	0	0	1

Province	Districts	Tehsils	UC	2012	2013	2014	2015	2016	2017	2018	2019	Mild	Mod.	Sevv	Mod_Sev	Drought score
PUNJAB	DERA GHAZI KHAN	TAUNSA	TIBBI QAISRANI	Normal	Normal	Normal	Normal	Normal	Mild	Normal		1	0	0	0	1
PUNJAB	DERA GHAZI KHAN	TAUNSA	VEHO WA	Normal	Normal	Normal	Normal	Normal	Mild	Normal		1	0	0	0	1
PUNJAB	KHANEWAL	JAHANIAN	CHAK NO. 127/10R	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	KHANEWAL	JAHANIAN	CHAK NO. 136/10-R	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	KHANEWAL	JAHANIAN	MIAN PUR	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	KHANEWAL	JAHANIAN	RAHIM SHAH	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	KHANEWAL	JAHANIAN	THATHA SADIQ ABAD	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	KHANEWAL	KABIRWALA	CHAK HYDERABAD	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	KHANEWAL	KABIRWALA	DAR KHANA	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	KHANEWAL	KABIRWALA	HABU KANWAIN	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	KHANEWAL	KABIRWALA	HUSSAIN ABAD	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	KHANEWAL	KABIRWALA	KOT BAHADUR	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	KHANEWAL	KABIRWALA	MAHNI SIAL	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 171/10R	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 36/10R	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 4/AH	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 43/10-R	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 70/10-R	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 100/15L	Normal	Mild	Normal	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 124/15L	Normal	Mild	Normal	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 61-A/15-L	Normal	Mild	Normal	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 74/15L	Normal	Mild	Normal	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. M-35	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1

Appendix 11. Prioritized Union Councils by drought hazard score

Province	Districts	Tehsils	UC	2012	2013	2014	2015	2016	2017	2018	2019	Mild	Mod.	Sevv	Mod_Sev	Drought score
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. WB-342	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. WB-357	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. WB-386	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	DUNYAPUR	MAKHDOOM AALI	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	DUNYAPUR	QUTAB PUR	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	DUNYAPUR	SULTAN AYUB QATAL	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	KAHROR PACCA	AMEER PUR SADDAT	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	KAHROR PACCA	BAHAWAL GARH	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	KAHROR PACCA	BURHAN PUR	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	KAHROR PACCA	CHOWKI MASTI KHAN	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	KAHROR PACCA	NASIR UD DIN WAHIN	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	KAHROR PACCA	RAPPER	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	LODHRAN	BHOOTIJI	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	LODHRAN	CHAMB KALYAR	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	LODHRAN	DERA JAND	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	LODHRAN	DORAN WALA	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	LODHRAN	KHANWAH GAHLWAN	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	LODHRAN	QURESHI WALA	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	LODHRAN	LODHRAN	SAAD ULLAH PUR	Normal	Normal	Mild	Normal	Normal	Normal	Normal		1	0	0	0	1
PUNJAB	MULTAN	JALALPUR PIRWALA	ALI PUR SADAT	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	JALALPUR PIRWALA	BAHADUR PUR	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	JALALPUR PIRWALA	KOTLA CHAKAR	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	JALALPUR PIRWALA	MIAN PUR BAILAY WALA	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0

Province	Districts	Tehsils	UC	2012	2013	2014	2015	2016	2017	2018	2019	Mild	Mod.	Sevv	Mod_Sev	Drought score
PUNJAB	MULTAN	JALALPUR PIRWALA	NAURAJA BHATA	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	MULTAN SADDAR	BASTI MALOK	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	MULTAN SADDAR	BOTEWALA	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	MULTAN SADDAR	CHAK NO. 18/M.R	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	MULTAN SADDAR	CHAK NO. 5 FAIZ	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	MULTAN SADDAR	GHARIALA	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	MULTAN SADDAR	KABIR PUR	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	MULTAN SADDAR	KHOKHAR	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	MULTAN SADDAR	KOTLA MEHARAN	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	MULTAN SADDAR	LAR	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	MULTAN SADDAR	MAKHDOOM RASHID TOWN	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	SHUJABAD	JALAL PUR KHAKHI	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	SHUJABAD	KOTLI NAJABAT	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	SHUJABAD	MATOTLI	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	SHUJABAD	RAJA RAM	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MULTAN	SHUJABAD	RASUL PUR	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	ALIPUR	ALI WALI	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	ALIPUR	BET MULLAN WALI	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	ALIPUR	KHIAR PUR SADAT	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	ALIPUR	YAKE WALI	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	JATOI	BELAWALA	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	JATOI	KOTLA GAUN	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	JATOI	VENUS	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0

Appendix 11. Prioritized Union Councils by drought hazard score

Province	Districts	Tehsils	UC	2012	2013	2014	2015	2016	2017	2018	2019	Mild	Mod.	Sevv	Mod_Sev	Drought score
PUNJAB	MUZAFFARGARH	KOT ADDU	DOGAR KALAMRA	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	KOT ADDU	MINHAN	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	KOT ADDU	PATTAL MUNDA	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	KOT ADDU	PATTI GHULAM ALI	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	KOT ADDU	SHADI KHAN MUNDA	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	KOT ADDU	SINAWAN	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	KOT ADDU	THATHA GURMANI	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	KOT ADDU	WANDAR	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	GUL WALA	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	ROHELAN WALI	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	SHAH JAMAL	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	SHARIF CHAJRA	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	WAN PATAFI	Normal	Normal	Normal	Normal	Normal	Normal	Normal		0	0	0	0	0
SINDH	BADIN	BADIN	BADIN 1	Normal	Normal	Mild	Moderate	Normal	Normal	Normal	Moderate	0	2	0	2	2
SINDH	BADIN	BADIN	NANDU	Normal	Normal	Mild	Moderate	Normal	Normal	Normal	Moderate	0	2	0	2	2
SINDH	BADIN	MATLI	HALIOTA	Normal	Normal	Mild	Moderate	Normal	Normal	Normal	Moderate	0	2	0	2	2
SINDH	BADIN	MATLI	TANDO GHULAM ALI	Normal	Normal	Mild	Moderate	Normal	Normal	Normal	Moderate	0	2	0	2	2
SINDH	BADIN	SHAHEED FAZIL RAHU	KARIO GHANOR	Normal	Normal	Mild	Moderate	Normal	Normal	Normal	Moderate	0	2	0	2	2
SINDH	BADIN	SHAHEED FAZIL RAHU	RAHOKI	Normal	Normal	Mild	Moderate	Normal	Normal	Normal	Moderate	0	2	0	2	2
SINDH	BADIN	SHAHEED FAZIL RAHU	SHAHEED FAZIL RAHU	Normal	Normal	Mild	Moderate	Normal	Normal	Normal	Moderate	0	2	0	2	2
SINDH	BADIN	TALHAR	SAEEDPUR	Normal	Normal	Mild	Moderate	Normal	Normal	Normal	Moderate	0	2	0	2	2
SINDH	BADIN	TANDO BAGO	KHADHARO	Normal	Normal	Mild	Moderate	Normal	Normal	Normal	Moderate	0	2	0	2	2
SINDH	BADIN	TANDO BAGO	KHALIFA QASIM	Normal	Normal	Mild	Moderate	Normal	Normal	Normal	Moderate	0	2	0	2	2
SINDH	SANGHAR	JAM NAWAZ ALI	BEERANI	Normal	Normal	Mild	Moderate	Normal	Mild	Mild	Normal	0	1	0	1	1
SINDH	SANGHAR	KHIPRO	DHALIYAR	Normal	Normal	Normal	Moderate	Normal	Normal	Mild	Severe	0	1	1	2	2

Province	Districts	Tehsils	UC	2012	2013	2014	2015	2016	2017	2018	2019	Mild	Mod.	Sevv	Mod_Sev	Drought score
SINDH	SANGHAR	SANGHAR	MIAN	Normal	Normal	Mild	Moderate	Normal	Normal	Mild	Severe	0	1	1	2	2
SINDH	SANGHAR	SHAHDADPUR	JATIA	Normal	Normal	Mild	Moderate	Normal	Normal	Mild	Normal	0	1	0	1	1
SINDH	SANGHAR	SHAHDADPUR	MALASI	Normal	Normal	Mild	Moderate	Normal	Normal	Mild	Normal	0	1	0	1	1
SINDH	SANGHAR	SINJHORO	JAFFAR KHAN LAGHARI	Normal	Normal	Mild	Moderate	Normal	Normal	Mild	Normal	0	1	0	1	1
SINDH	SANGHAR	SINJHORO	JHOL	Normal	Normal	Mild	Moderate	Normal	Normal	Mild	Normal	0	1	0	1	1
SINDH	SANGHAR	TANDO ADAM	MANIK THAHIM	Normal	Normal	Mild	Moderate	Normal	Mild	Mild	Normal	0	1	0	1	1
SINDH	SANGHAR	TANDO ADAM	MIR HASSAN MURREE	Normal	Normal	Mild	Moderate	Normal	Mild	Mild	Normal	0	1	0	1	1
SINDH	UMER KOT	KUNRI	BASTAN	Normal	Normal	Normal	Moderate	Normal	Normal	Normal	Severe	0	1	1	2	2
SINDH	UMER KOT	KUNRI	KUNRI	Normal	Normal	Normal	Moderate	Normal	Normal	Normal	Severe	0	1	1	2	2
SINDH	UMER KOT	KUNRI	SHER KHAN CHANDIO	Normal	Normal	Normal	Moderate	Normal	Normal	Normal	Severe	0	1	1	2	2
SINDH	UMER KOT	PITHORO	SHAH MARDAN SHAH	Normal	Normal	Normal	Moderate	Normal	Normal	Mild	Severe	0	1	1	2	2
SINDH	UMER KOT	SAMARO	PADHRIO FARM	Normal	Normal	Normal	Moderate	Normal	Normal	Normal	Severe	0	1	1	2	2
SINDH	UMER KOT	SAMARO	SAMARO ROAD	Normal	Normal	Normal	Moderate	Normal	Normal	Normal	Severe	0	1	1	2	2
SINDH	UMER KOT	SAMARO	SATARYOON	Normal	Normal	Normal	Moderate	Normal	Normal	Normal	Severe	0	1	1	2	2
SINDH	UMER KOT	UMER KOT	ATTA MUHAMMAD PALI	Normal	Normal	Normal	Moderate	Normal	Normal	Mild	Severe	0	1	1	2	2
SINDH	UMER KOT	UMER KOT	DHORONADO	Normal	Normal	Normal	Moderate	Normal	Normal	Mild	Severe	0	1	1	2	2
SINDH	UMER KOT	UMER KOT	SABHO	Normal	Normal	Normal	Moderate	Normal	Normal	Mild	Severe	0	1	1	2	2

Appendix 12. Union Councils – final score by tehsil

Province	Districts	Tehsils	UC	priority	weight
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	SAKHI SARWAR	0	0.6
PUNJAB	DERA GHAZI KHAN	D.G KHAN (TRIBAL AREA)	FAZILA KACH TAMAN BAZDAR	0	0.73
PUNJAB	DERA GHAZI KHAN	D.G KHAN (TRIBAL AREA)	TAMAN QAISRAANI	0	0.73
PUNJAB	DERA GHAZI KHAN	D.G KHAN (TRIBAL AREA)	MUBARAKI TAMAN BAZDAR KHOSA	0	0.73
PUNJAB	DERA GHAZI KHAN	D.G KHAN (TRIBAL AREA)	BARTHI TAMAN BAZDAR	0	0.73
PUNJAB	DERA GHAZI KHAN	D.G KHAN (TRIBAL AREA)	TAMAN LAGHARI	0	1
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	MAIMOORI	0	1.2
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	WADOR	0	1.2
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	CHOTI ZIRIN	0	1.2
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	URBAN 7	0	1.2
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	JAKHAR IMAM SHAH	0	1.47
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	HAJI GHAZI	0	1.47
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	SHAH SADDAR DIN	0	1.47
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	CHORHATA	0	1.47
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	GHOUSABAD	0	1.47
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	URBAN 6	0	1.8
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	MUTFARIQ CHOHAN	0	1.8
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	GADAI	0	1.93
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	YARU	0	1.93
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	BAHADUR GARH	0	1.93
PUNJAB	DERA GHAZI KHAN	TAUNSA	MANGROTHA	1	1.93
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	CHOTI BALA	0	1.93
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	KALA	1	2.07
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	SMENA	0	2.07
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	DARKHWAST JAMAL KHAN	1	2.07
PUNJAB	DERA GHAZI KHAN	TAUNSA	FATEH KHAN	1	2.07
PUNJAB	DERA GHAZI KHAN	TAUNSA	TONSA 1	0	2.07
PUNJAB	DERA GHAZI KHAN	TAUNSA	MAKOL KALAN	0	2.2

Province	Districts	Tehsils	UC	priority	weight
PUNJAB	DERA GHAZI KHAN	TAUNSA	NARRI SHUMALI	0	2.2
PUNJAB	DERA GHAZI KHAN	TAUNSA	SOKAR	0	2.2
PUNJAB	DERA GHAZI KHAN	TAUNSA	HAIRO SHARQI	1	2.2
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	MANA AHMADANI	1	2.4
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	URBAN 4	0	2.4
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	BASTI MALANA	1	2.4
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	URBAN 3	0	2.4
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	JHOK UTRA	1	2.4
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	KOT CHATTA	1	2.4
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	URBAN 2	0	2.4
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	URBAN 1	0	2.4
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	PAIGAH	1	2.4
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	SHANDAN LUND	0	2.4
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	NOTAK MEHMEED	1	2.4
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	RAIMAN	0	2.4
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	URBAN 5	0	2.53
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	KHAKHI	1	2.53
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	KOT MUBARAK	0	2.53
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	NAWAN	0	2.53
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	DRAHMAH	0	2.53
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	KOT HAIBAT	1	2.53
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	BASTI FAUJA	0	2.53
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	ALI WALA	1	2.53
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	PIR ADIL	1	2.53
PUNJAB	DERA GHAZI KHAN	DERA GHAZI KHAN	CHABRI	1	2.67
PUNJAB	DERA GHAZI KHAN	TAUNSA	TIBBI QAISRANI	1	2.67
PUNJAB	DERA GHAZI KHAN	TAUNSA	JALU WALI	1	2.67
PUNJAB	DERA GHAZI KHAN	TAUNSA	VEHO WA	1	2.67
PUNJAB	DERA GHAZI KHAN	TAUNSA	KOT QAISRANI	1	2.67
PUNJAB	DERA GHAZI KHAN	TAUNSA	MORJHANGI	1	2.8

Province	Districts	Tehsils	UC	priority	weight
PUNJAB	DERA GHAZI KHAN	TAUNSA	LAKHANI	0	3.07
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 80/10-R	0	0.6
PUNJAB	KHANEWAL	KABIRWALA	DADOANA	0	0.6
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 88/10R	0	0.6
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 131/15L	0	0.73
PUNJAB	KHANEWAL	KABIRWALA	SARDAR PUR	0	0.87
PUNJAB	KHANEWAL	KABIRWALA	KUND SARGANA	0	0.87
PUNJAB	KHANEWAL	KABIRWALA	SALAR WAHAN NOU	0	0.87
PUNJAB	KHANEWAL	JAHANIAN	CHAK NO. 106/10R	0	1.2
PUNJAB	KHANEWAL	KABIRWALA	MONGANWALA	0	1.2
PUNJAB	KHANEWAL	KABIRWALA	IBRAHIM PUR	0	1.2
PUNJAB	KHANEWAL	JAHANIAN	CHAK NO. 55/10R	0	1.2
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 43/10-R	1	1.2
PUNJAB	KHANEWAL	JAHANIAN	CHAK NO. 157/10-R	0	1.2
PUNJAB	KHANEWAL	KABIRWALA	CHAK NORANG SHAH	0	1.2
PUNJAB	KHANEWAL	KABIRWALA	BAGAR SARGANA	0	1.2
PUNJAB	KHANEWAL	KABIRWALA	KOT ISLAM	0	1.2
PUNJAB	KHANEWAL	KABIRWALA	OKANWALA	0	1.2
PUNJAB	KHANEWAL	KABIRWALA	NABI PUR	0	1.2
PUNJAB	KHANEWAL	JAHANIAN	CHAK NO. 149/10R	0	1.2
PUNJAB	KHANEWAL	JAHANIAN	CHAK NO. 140/10	0	1.2
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO.4/8-AR	0	1.2
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 7/9-R	0	1.2
PUNJAB	KHANEWAL	KABIRWALA	HAVELI KORANGA	0	1.2
PUNJAB	KHANEWAL	KABIRWALA	QATAL PUR	0	1.2
PUNJAB	KHANEWAL	KABIRWALA	MOLA PUR	0	1.2
PUNJAB	KHANEWAL	KABIRWALA	MANKOT	0	1.33
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 134/16L	0	1.33
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 115/15-L	0	1.33
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 123/7ER	0	1.33
PUNJAB	KHANEWAL	KABIRWALA	MAMDAL	0	1.33
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 78/15L	0	1.33
PUNJAB	KHANEWAL	KABIRWALA	NARHAL	0	1.33
PUNJAB	KHANEWAL	MIAN CHANNU	ROTLA	0	1.33
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 9/A-H	0	1.33
PUNJAB	KHANEWAL	KABIRWALA	MARI SAHU	0	1.33
PUNJAB	KHANEWAL	KABIRWALA	UMEED GARH	0	1.33
PUNJAB	KHANEWAL	KHANEWAL	KHANEWAL KEHNA	0	1.33
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 76/10R	0	1.8
PUNJAB	KHANEWAL	KABIRWALA	JODH PUR	0	1.8
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 4/AH	1	1.8
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 92/10R	0	1.8
PUNJAB	KHANEWAL	KABIRWALA	KOT BAHADUR	1	1.8
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 30/10R	0	1.8

Province	Districts	Tehsils	UC	priority	weight
PUNJAB	KHANEWAL	JAHANIAN	CHAK NO. 127/10R	1	1.8
PUNJAB	KHANEWAL	KABIRWALA	HASHMAT MARALI	0	1.8
PUNJAB	KHANEWAL	KABIRWALA	MAHNI SIAL	1	1.8
PUNJAB	KHANEWAL	KABIRWALA	SHAM KOT	0	1.8
PUNJAB	KHANEWAL	JAHANIAN	MIAN PUR	1	1.8
PUNJAB	KHANEWAL	JAHANIAN	RAHIM SHAH	1	1.8
PUNJAB	KHANEWAL	KABIRWALA	HABU KANWAIN	1	1.8
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 58/10-R	0	1.8
PUNJAB	KHANEWAL	KABIRWALA	HUSSAIN ABAD	1	1.8
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 171/10R	1	1.8
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 70/10-R	1	1.8
PUNJAB	KHANEWAL	KHANEWAL	BHEROWAL	0	1.8
PUNJAB	KHANEWAL	KABIRWALA	DAR KHANA	1	1.8
PUNJAB	KHANEWAL	KABIRWALA	CHAK HYDERABAD	1	1.8
PUNJAB	KHANEWAL	JAHANIAN	CHAK NO. 136/10-R	1	1.8
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 61-A/15-L	1	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 137/16L	0	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	NOORI SOHAG	0	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 129/15-L	0	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 44/15-L	0	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 124/15L	1	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	CHOGHTAH PANJWANA	0	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 72-73/15L	0	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	JARAHI	0	1.93
PUNJAB	KHANEWAL	JAHANIAN	THATHA SADIQ ABAD	1	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	86 CHAK NO. 92/15L	0	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 84/15L	0	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 100/15L	1	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 93/15-L	0	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	GHOUS PUR	0	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 14/8-AR	0	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 7/8AR	0	1.93
PUNJAB	KHANEWAL	KHANEWAL	CHAK NO. 36/10R	1	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 74/15L	1	1.93
PUNJAB	KHANEWAL	KABIRWALA	BAQIR PUR	0	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 126/15L	0	1.93
PUNJAB	KHANEWAL	MIAN CHANNU	CHAK NO. 85/15L	0	2.07
PUNJAB	LODHRAN	LODHRAN	ADAM WAHIN	0	0.73
PUNJAB	LODHRAN	KAHROR PACCA	GAHI MIMR	0	0.73
PUNJAB	LODHRAN	DUNYAPUR	DUNYA PUR	0	1.33
PUNJAB	LODHRAN	KAHROR PACCA	TIBI WADAN	0	1.33
PUNJAB	LODHRAN	LODHRAN	WAHI SALAMAT ROY	0	1.33
PUNJAB	LODHRAN	LODHRAN	LODHRAN	0	1.33
PUNJAB	LODHRAN	DUNYAPUR	QUTAB PUR	1	1.33
PUNJAB	LODHRAN	DUNYAPUR	LADHA BOHER	0	1.33

Appendix 12. Union Councils – final score by tehsil

Province	Districts	Tehsils	UC	priority	weight
PUNJAB	LODHRAN	LODHRAN	LAHORI	0	1.33
PUNJAB	LODHRAN	KAHROR PACCA	FARIDABAD	0	1.33
PUNJAB	LODHRAN	DUNYAPUR	SIRAJ WALA	0	1.33
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. WB-353	0	1.33
PUNJAB	LODHRAN	LODHRAN	CHAK HAMMTA	0	1.33
PUNJAB	LODHRAN	KAHROR PACCA	NOOR SHAH GILANI	0	1.33
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. WB-386	1	1.33
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. WB-237	0	1.33
PUNJAB	LODHRAN	LODHRAN	SALSADDR	0	1.33
PUNJAB	LODHRAN	LODHRAN	CHAK NO. M-49	0	1.33
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. WB-231	0	1.33
PUNJAB	LODHRAN	DUNYAPUR	MAQBOOL WAH	0	1.47
PUNJAB	LODHRAN	LODHRAN	SAAD ULLAH PUR	1	1.6
PUNJAB	LODHRAN	LODHRAN	CHAMB KALYAR	1	1.6
PUNJAB	LODHRAN	KAHROR PACCA	ALI PUR KANJOO	0	1.93
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. WB-360	0	1.93
PUNJAB	LODHRAN	KAHROR PACCA	CHOWKI MASTI KHAN	1	1.93
PUNJAB	LODHRAN	LODHRAN	DERA JAND	1	1.93
PUNJAB	LODHRAN	LODHRAN	RAJAPUR	0	1.93
PUNJAB	LODHRAN	LODHRAN	DORAN WALA	1	1.93
PUNJAB	LODHRAN	KAHROR PACCA	BURHAN PUR	1	1.93
PUNJAB	LODHRAN	LODHRAN	KHANWAH GAHLWAN	1	1.93
PUNJAB	LODHRAN	KAHROR PACCA	JAMRANI WAH	0	1.93
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. WB-357	1	1.93
PUNJAB	LODHRAN	KAHROR PACCA	RANA WAHIN	0	1.93
PUNJAB	LODHRAN	LODHRAN	QURESHI WALA	1	1.93
PUNJAB	LODHRAN	LODHRAN	KAMALPUR JATIYAL	0	1.93
PUNJAB	LODHRAN	KAHROR PACCA	SHAH PUR PHUL	0	1.93
PUNJAB	LODHRAN	LODHRAN	RAWANI	0	1.93
PUNJAB	LODHRAN	KAHROR PACCA	NASIR UD DIN WAHIN	1	1.93
PUNJAB	LODHRAN	LODHRAN	KONDI	0	1.93
PUNJAB	LODHRAN	LODHRAN	GOGRAN	0	1.93
PUNJAB	LODHRAN	LODHRAN	SAGWAN	0	1.93
PUNJAB	LODHRAN	KAHROR PACCA	MASSA KOTHA	0	1.93
PUNJAB	LODHRAN	LODHRAN	SUMMARA	0	1.93
PUNJAB	LODHRAN	DUNYAPUR	SULTAN AYUB QATAL	1	1.93
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. WB-355	0	1.93
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. WB-342	1	1.93
PUNJAB	LODHRAN	KAHROR PACCA	RAPPER	1	1.93
PUNJAB	LODHRAN	DUNYAPUR	JHANDIRWAH	0	1.93
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. M-35	1	1.93
PUNJAB	LODHRAN	LODHRAN	DANORAN	0	1.93
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. M-11	0	1.93
PUNJAB	LODHRAN	KAHROR PACCA	CHELE WAHAN	0	1.93
PUNJAB	LODHRAN	KAHROR PACCA	DAKHANO GHARO	0	1.93

Province	Districts	Tehsils	UC	priority	weight
PUNJAB	LODHRAN	KAHROR PACCA	NAU QABIL WAH	0	1.93
PUNJAB	LODHRAN	LODHRAN	HAVELI NASIR KHAN	0	1.93
PUNJAB	LODHRAN	KAHROR PACCA	AMEER PUR SADDAT	1	1.93
PUNJAB	LODHRAN	LODHRAN	BHOOTIJI	1	1.93
PUNJAB	LODHRAN	KAHROR PACCA	BAHAWAL GARH	1	1.93
PUNJAB	LODHRAN	DUNYAPUR	CHAK NO. WB-384	0	1.93
PUNJAB	LODHRAN	DUNYAPUR	MAKHDOOM AALI	1	1.93
PUNJAB	LODHRAN	DUNYAPUR	JALA ARAIN	0	1.93
PUNJAB	LODHRAN	LODHRAN	WAHI IMAM BAKHSH	0	2.07
PUNJAB	MULTAN	MULTAN CITY	JHAKAR PUR	0	0
PUNJAB	MULTAN	MULTAN CITY	TARAF MUBARAK DOIM	0	0
PUNJAB	MULTAN	MULTAN CITY	MULTAN CANTT 2	0	0
PUNJAB	MULTAN	MULTAN CITY	NEW NAZIM ABAD COLONY	0	0
PUNJAB	MULTAN	MULTAN CITY	NEW MULTAN	0	0
PUNJAB	MULTAN	MULTAN CITY	NIZAM ABAD	0	0
PUNJAB	MULTAN	MULTAN CITY	IQBAL NAGAR	0	0
PUNJAB	MULTAN	MULTAN CITY	GULNAR COLONY	0	0
PUNJAB	MULTAN	MULTAN CITY	JAMAL PUR COLONY	0	0
PUNJAB	MULTAN	MULTAN CITY	GLASS FACTORY	0	0
PUNJAB	MULTAN	MULTAN CITY	PIPALS COLONY	0	0
PUNJAB	MULTAN	MULTAN CITY	OFFICER COLONY	0	0
PUNJAB	MULTAN	MULTAN CITY	ABBAS COLONY	0	0.2
PUNJAB	MULTAN	MULTAN CITY	QAISM BELA	0	0.2
PUNJAB	MULTAN	MULTAN CITY	GHOSS PURA	0	0.6
PUNJAB	MULTAN	MULTAN CITY	MULTAN CANTT 3	0	0.6
PUNJAB	MULTAN	MULTAN CITY	SADIQ COLONY	0	0.6
PUNJAB	MULTAN	MULTAN SADDAR	SALEH MAHAY	0	0.6
PUNJAB	MULTAN	MULTAN CITY	MUHALLAH SHAH GARDAIZ	0	0.6
PUNJAB	MULTAN	MULTAN CITY	MUHALLAH KAMANGRAN	0	0.6
PUNJAB	MULTAN	MULTAN CITY	MUMTAZ ABAD COLONY	0	0.6
PUNJAB	MULTAN	MULTAN CITY	LATIF ABAD	0	0.6
PUNJAB	MULTAN	MULTAN CITY	SHADMAN COLONY	0	0.6
PUNJAB	MULTAN	MULTAN CITY	MUHALLAH QADEER ABAD	0	0.6
PUNJAB	MULTAN	MULTAN CITY	KHANKAN INAYAT SHAH	0	0.6
PUNJAB	MULTAN	MULTAN CITY	GULZAIB COLONY	0	0.6
PUNJAB	MULTAN	MULTAN CITY	NIYAZ ABAD	0	0.6
PUNJAB	MULTAN	MULTAN CITY	WRITTERS COLONY	0	0.6
PUNJAB	MULTAN	MULTAN CITY	JAMIL ABAD	0	0.6
PUNJAB	MULTAN	MULTAN CITY	MANZOORABAD	0	0.6
PUNJAB	MULTAN	MULTAN CITY	HASSAN PARWAN COLONY	0	0.6
PUNJAB	MULTAN	MULTAN CITY	SALIM COLONY	0	0.6
PUNJAB	MULTAN	MULTAN CITY	TAMBER MARKET	0	0.6
PUNJAB	MULTAN	MULTAN CITY	BHEENI	0	0.6
PUNJAB	MULTAN	MULTAN CITY	MAHARBAN COLONY	0	0.6
PUNJAB	MULTAN	MULTAN CITY	PANJAD COLONY	0	0.6

Province	Districts	Tehsils	UC	priority	weight
PUNJAB	MULTAN	MULTAN CITY	GULSHAN PANJ FAIZ	0	0.6
PUNJAB	MULTAN	MULTAN CITY	NEL KOT	0	0.6
PUNJAB	MULTAN	MULTAN CITY	SHARIF PURA	0	0.6
PUNJAB	MULTAN	MULTAN CITY	AKHTAR ABAD	0	0.8
PUNJAB	MULTAN	MULTAN SADDAR	BOSAN	0	0.8
PUNJAB	MULTAN	MULTAN CITY	MUHALLAH HAKEMA WALA	0	0.8
PUNJAB	MULTAN	MULTAN CITY	TIBA MASAUD PUR	0	0.8
PUNJAB	MULTAN	MULTAN CITY	ABID COLONY	0	1
PUNJAB	MULTAN	MULTAN SADDAR	LUTF ABAD	0	1
PUNJAB	MULTAN	MULTAN CITY	MUZAFFAR ABAD	0	1
PUNJAB	MULTAN	MULTAN CITY	BAKHAR AARBI	0	1
PUNJAB	MULTAN	MULTAN SADDAR	BACH KHUSROO ABAD	0	1
PUNJAB	MULTAN	MULTAN CITY	ALMDI SORAH	0	1
PUNJAB	MULTAN	MULTAN CITY	KHUWAJA FAREED COLONY	0	1
PUNJAB	MULTAN	MULTAN CITY	GUL DIN COLONY	0	1.2
PUNJAB	MULTAN	MULTAN SADDAR	DOMRAH	0	1.2
PUNJAB	MULTAN	MULTAN CITY	PEERAN GHAIB	0	1.2
PUNJAB	MULTAN	MULTAN CITY	SHAH RISAL	0	1.2
PUNJAB	MULTAN	MULTAN CITY	GHANGIRABAD	0	1.2
PUNJAB	MULTAN	MULTAN CITY	GALGASHT COLONY	0	1.4
PUNJAB	MULTAN	MULTAN SADDAR	AALM PUR	0	1.6
PUNJAB	MULTAN	MULTAN SADDAR	SHER SHAH	0	1.6
PUNJAB	MULTAN	MULTAN CITY	ABBAS PURA	0	1.6
PUNJAB	MULTAN	MULTAN SADDAR	PANJ KOHA	0	1.6
PUNJAB	MULTAN	SHUJABAD	PAUNTA	0	1.6
PUNJAB	MULTAN	SHUJABAD	MARHA	0	1.6
PUNJAB	MULTAN	MULTAN SADDAR	BINDA SINDEELA	0	1.6
PUNJAB	MULTAN	MULTAN CITY	HASSAN ABAD	0	1.8
PUNJAB	MULTAN	MULTAN SADDAR	QADIR PURAN TOWN	0	1.8
PUNJAB	MULTAN	MULTAN CITY	DORANA NANGANA	0	1.8
PUNJAB	MULTAN	MULTAN CITY	WAPDA COLONY	0	1.8
PUNJAB	MULTAN	MULTAN CITY	SHAMASABAD COLONY	0	1.8
PUNJAB	MULTAN	MULTAN SADDAR	TATA PUR	0	1.8
PUNJAB	MULTAN	MULTAN SADDAR	ABAS PUR	0	1.8
PUNJAB	MULTAN	JALALPUR PIRWALA	ALI PUR SADAT	1	2
PUNJAB	MULTAN	SHUJABAD	SIKANDAR ABAD	0	2
PUNJAB	MULTAN	MULTAN CITY	BAGH DEWAN	0	2
PUNJAB	MULTAN	MULTAN SADDAR	KHOKHAR	1	2
PUNJAB	MULTAN	MULTAN SADDAR	HAMID PUR KANORA	0	2
PUNJAB	MULTAN	JALALPUR PIRWALA	GHAZI PUR	0	2.2
PUNJAB	MULTAN	JALALPUR PIRWALA	JAHAN PUR	0	2.2
PUNJAB	MULTAN	JALALPUR PIRWALA	ANAYAT PUR	0	2.2
PUNJAB	MULTAN	JALALPUR PIRWALA	BEET KECH	0	2.2
PUNJAB	MULTAN	MULTAN SADDAR	KHAN PUR MARAL	0	2.4
PUNJAB	MULTAN	MULTAN CITY	RANGEELA PUR	0	2.4

Province	Districts	Tehsils	UC	priority	weight
PUNJAB	MULTAN	MULTAN SADDAR	MULTANI WALA	0	2.4
PUNJAB	MULTAN	MULTAN SADDAR	QADIR PUR LAR	0	2.4
PUNJAB	MULTAN	SHUJABAD	SUJHA ABAD 2	0	2.4
PUNJAB	MULTAN	JALALPUR PIRWALA	LALWAH	0	2.4
PUNJAB	MULTAN	MULTAN SADDAR	BADHALA SANT	0	2.4
PUNJAB	MULTAN	MULTAN SADDAR	KOTLA MEHARAN	1	2.4
PUNJAB	MULTAN	MULTAN SADDAR	BALI WALA	0	2.4
PUNJAB	MULTAN	MULTAN SADDAR	BOTEWALA	1	2.4
PUNJAB	MULTAN	MULTAN SADDAR	CHAK NO. 18/M.R	1	2.4
PUNJAB	MULTAN	MULTAN SADDAR	MATI TAL	0	2.4
PUNJAB	MULTAN	MULTAN CITY	KASAB PURA COLONY	0	2.4
PUNJAB	MULTAN	MULTAN SADDAR	LOTHAR	0	2.4
PUNJAB	MULTAN	JALALPUR PIRWALA	JALAL PUR PIR WALA 1	0	2.4
PUNJAB	MULTAN	SHUJABAD	SHAH PUR BHA	0	2.4
PUNJAB	MULTAN	MULTAN SADDAR	AYAZ ABAD MIDDLE	0	2.4
PUNJAB	MULTAN	SHUJABAD	RASUL PUR	1	2.4
PUNJAB	MULTAN	MULTAN SADDAR	KOTHE WALA	0	2.4
PUNJAB	MULTAN	JALALPUR PIRWALA	KOTLA CHAKAR	1	2.4
PUNJAB	MULTAN	SHUJABAD	KOTLI NAJABAT	1	2.4
PUNJAB	MULTAN	MULTAN SADDAR	LAR	1	2.4
PUNJAB	MULTAN	MULTAN SADDAR	BASTI MALOK	1	2.4
PUNJAB	MULTAN	MULTAN SADDAR	JHOK LASHKER PUR	0	2.4
PUNJAB	MULTAN	MULTAN CITY	DERAH BADHO MALIK	0	2.4
PUNJAB	MULTAN	MULTAN SADDAR	KABIR PUR	1	2.4
PUNJAB	MULTAN	MULTAN SADDAR	CHAK NO. 5 FAIZ	1	2.4
PUNJAB	MULTAN	MULTAN SADDAR	RANA WAHIN	0	2.4
PUNJAB	MULTAN	MULTAN CITY	SHAH RUKAN ALAM COLONY	0	2.4
PUNJAB	MULTAN	SHUJABAD	MATOTLI	1	2.4
PUNJAB	MULTAN	JALALPUR PIRWALA	JALAL PUR PIR WALA 2	0	2.4
PUNJAB	MULTAN	SHUJABAD	BASTI MITHU	0	2.4
PUNJAB	MULTAN	SHUJABAD	SUJHA ABAD 1	0	2.4
PUNJAB	MULTAN	SHUJABAD	THATHA GHULWAN	0	2.4
PUNJAB	MULTAN	SHUJABAD	RAJA RAM	1	2.4
PUNJAB	MULTAN	MULTAN SADDAR	QASBA MIDDLE	0	2.4
PUNJAB	MULTAN	MULTAN CITY	KIAN PUR	0	2.4
PUNJAB	MULTAN	MULTAN SADDAR	MAKHDOOM RASHID TOWN	1	2.6
PUNJAB	MULTAN	JALALPUR PIRWALA	MIAN PUR BAILAY WALA	1	2.6
PUNJAB	MULTAN	MULTAN SADDAR	GHARIALA	1	2.6
PUNJAB	MULTAN	JALALPUR PIRWALA	DARAB PUR	0	2.6
PUNJAB	MULTAN	JALALPUR PIRWALA	KARAM ALI WALA	0	2.6
PUNJAB	MULTAN	MULTAN CITY	ASHRAF COLONY	0	2.6
PUNJAB	MULTAN	SHUJABAD	GAJUHATA	0	2.6
PUNJAB	MULTAN	MULTAN SADDAR	BANGAL WALA	0	2.6
PUNJAB	MULTAN	SHUJABAD	PANJAI	0	2.6
PUNJAB	MULTAN	JALALPUR PIRWALA	NAURAJA BHATA	1	2.6

Appendix 12. Union Councils – final score by tehsil

Province	Districts	Tehsils	UC	priority	weight
PUNJAB	MULTAN	SHUJABAD	CHAK R.S	0	2.6
PUNJAB	MULTAN	SHUJABAD	GARDEZPUR	0	2.6
PUNJAB	MULTAN	JALALPUR PIRWALA	BAHADUR PUR	1	2.8
PUNJAB	MULTAN	JALALPUR PIRWALA	KHAN BELA	0	2.8
PUNJAB	MULTAN	SHUJABAD	JALAL PUR KHAKHI	1	2.8
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	MUZAFFARGARH CITY 1	0	0.6
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	MUZAFFARGARH CITY 4	0	0.6
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	MUZAFFARGARH CITY 6	0	0.6
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	LATKARAN	0	0.6
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	MUZAFFARGARH CITY 3	0	0.73
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	GANGA	0	0.87
PUNJAB	MUZAFFARGARH	ALIPUR	MURAD PUR JANUBI	0	0.87
PUNJAB	MUZAFFARGARH	KOT ADDU	BAIT QAIM WALA	0	0.87
PUNJAB	MUZAFFARGARH	KOT ADDU	GUJRAT	0	0.87
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	RANG PUR	0	0.87
PUNJAB	MUZAFFARGARH	ALIPUR	KHAN GARH DOIEMA	0	0.87
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	ROHELAN WALI	1	1.2
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	MUZAFFARGARH CITY 2	0	1.2
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	NOHEN WALI	0	1.33
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	JANUBI UMARPUR	0	1.33
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	SHAMALI KHAN PUR	0	1.33
PUNJAB	MUZAFFARGARH	KOT ADDU	WANDAR	1	1.33
PUNJAB	MUZAFFARGARH	JATOI	MIR HAZAR KHAN	0	1.47
PUNJAB	MUZAFFARGARH	KOT ADDU	SHEIKH UMMER	0	1.47
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	TALAIRI	0	1.47
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	THATHA QURESHI	0	1.47
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	IBRAHIM WALI	0	1.47
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	MURAD ABAD	0	1.47
PUNJAB	MUZAFFARGARH	JATOI	JHUGGI WALA	0	1.47
PUNJAB	MUZAFFARGARH	KOT ADDU	HANJRAI	0	1.47
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	CHAK FRAZI	0	1.47
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	MUZAFFARGARH CITY 5	0	1.8
PUNJAB	MUZAFFARGARH	KOT ADDU	CHOK SARWAR SHAHEED	0	1.8
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	KHAN GARH	0	1.8
PUNJAB	MUZAFFARGARH	ALIPUR	ALI PUR	0	1.8
PUNJAB	MUZAFFARGARH	ALIPUR	ALI WALI	1	1.93
PUNJAB	MUZAFFARGARH	KOT ADDU	PATTI GHULAM ALI	1	1.93
PUNJAB	MUZAFFARGARH	KOT ADDU	IHSAN PUR	0	1.93
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	GUL WALA	1	1.93
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	BASIRA	0	1.93
PUNJAB	MUZAFFARGARH	KOT ADDU	GHAZIGHAT	0	1.93
PUNJAB	MUZAFFARGARH	KOT ADDU	BHARI YOG	0	1.93
PUNJAB	MUZAFFARGARH	KOT ADDU	BUDH	0	1.93
PUNJAB	MUZAFFARGARH	KOT ADDU	PATTAL MUNDA	1	1.93
PUNJAB	MUZAFFARGARH	KOT ADDU	CHAK NO. 565/T.D.A	0	1.93

Province	Districts	Tehsils	UC	priority	weight
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	GERE WAHIN	0	1.93
PUNJAB	MUZAFFARGARH	ALIPUR	MUDWALA	0	2.07
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	JAGAT PUR	0	2.07
PUNJAB	MUZAFFARGARH	ALIPUR	LANGAR WAH	0	2.07
PUNJAB	MUZAFFARGARH	ALIPUR	GHALWAN	0	2.07
PUNJAB	MUZAFFARGARH	ALIPUR	FATEH PUR JANUBI	0	2.07
PUNJAB	MUZAFFARGARH	JATOI	RAM PUR	0	2.07
PUNJAB	MUZAFFARGARH	KOT ADDU	THATHA GURMANI	1	2.07
PUNJAB	MUZAFFARGARH	JATOI	BINDA ISHAAQ	0	2.07
PUNJAB	MUZAFFARGARH	KOT ADDU	DOGAR KALAMRA	1	2.07
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	UTTAR SANDAILA	0	2.07
PUNJAB	MUZAFFARGARH	JATOI	BAKAENI	0	2.2
PUNJAB	MUZAFFARGARH	JATOI	SABAY WALA	0	2.4
PUNJAB	MUZAFFARGARH	KOT ADDU	DIRA DIN TIYAH	0	2.4
PUNJAB	MUZAFFARGARH	JATOI	SHAHR SULTAN	0	2.4
PUNJAB	MUZAFFARGARH	KOT ADDU	CHAK NO. 507/T.D.A	0	2.4
PUNJAB	MUZAFFARGARH	KOT ADDU	CHAK NO. 632/T.D.A	0	2.4
PUNJAB	MUZAFFARGARH	ALIPUR	BAZWALA	0	2.4
PUNJAB	MUZAFFARGARH	JATOI	JATUI CITY	0	2.4
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	ALOODE WALI	0	2.4
PUNJAB	MUZAFFARGARH	JATOI	KOTLA GAUN	1	2.4
PUNJAB	MUZAFFARGARH	JATOI	BAIR BUND	0	2.4
PUNJAB	MUZAFFARGARH	KOT ADDU	MIR PUR BHAGAL	0	2.4
PUNJAB	MUZAFFARGARH	KOT ADDU	CHAK NO. 547	0	2.4
PUNJAB	MUZAFFARGARH	KOT ADDU	WANHI WAL	0	2.4
PUNJAB	MUZAFFARGARH	JATOI	SHEBAZ PUR	0	2.4
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	MAIRRA	0	2.4
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	SHARIF CHAJRA	1	2.53
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	DATREEN	0	2.53
PUNJAB	MUZAFFARGARH	KOT ADDU	ALORED	0	2.53
PUNJAB	MUZAFFARGARH	KOT ADDU	PATTI DAYA CHOCK	0	2.53
PUNJAB	MUZAFFARGARH	KOT ADDU	SINAWAN	1	2.53
PUNJAB	MUZAFFARGARH	JATOI	JHALARIAN	0	2.53
PUNJAB	MUZAFFARGARH	KOT ADDU	SHADI KHAN MUNDA	1	2.53
PUNJAB	MUZAFFARGARH	JATOI	BELAWALA	1	2.53
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	GHAZANFAR GARH	0	2.53
PUNJAB	MUZAFFARGARH	KOT ADDU	DAIRA DIN PANAH	0	2.53
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	KARIM DAD QURESHI	0	2.53
PUNJAB	MUZAFFARGARH	JATOI	VENUS	1	2.53
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	BASTI KHARK	0	2.53
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	MANIK PUR	0	2.53
PUNJAB	MUZAFFARGARH	KOT ADDU	TIBBA MUSTAQIL DARMIANI	0	2.53
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	WAN PATAFI	1	2.53
PUNJAB	MUZAFFARGARH	KOT ADDU	PITAL KOT ADU	0	2.53
PUNJAB	MUZAFFARGARH	ALIPUR	BET MULLAN WALI	1	2.53

Appendix 12. Union Councils – final score by tehsil

Province	Districts	Tehsils	UC	priority	weight
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	MANKA BHATA	0	2.53
PUNJAB	MUZAFFARGARH	ALIPUR	YAKE WALI	1	2.53
PUNJAB	MUZAFFARGARH	KOT ADDU	MINHAN	1	2.53
PUNJAB	MUZAFFARGARH	KOT ADDU	MEHMOOD KOT	0	2.53
PUNJAB	MUZAFFARGARH	JATOI	JATOI SHAMALI	0	2.53
PUNJAB	MUZAFFARGARH	JATOI	DAMAR WALA SHUMALI	0	2.53
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	USMAN KORYA	0	2.67
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	AHMAD MOHANA	0	2.67
PUNJAB	MUZAFFARGARH	KOT ADDU	KOT ADU	0	2.67
PUNJAB	MUZAFFARGARH	ALIPUR	SETPUR	0	2.67
PUNJAB	MUZAFFARGARH	MUZAFFARGARH	SHAH JAMAL	1	2.67
PUNJAB	MUZAFFARGARH	ALIPUR	SULTANPUR	0	2.67
PUNJAB	MUZAFFARGARH	JATOI	SHEHAR SULTAN	0	2.67
PUNJAB	MUZAFFARGARH	ALIPUR	KHIAR PUR SADAT	1	2.67
SINDH	BADIN	BADIN	PIR AALISHAH	0	1
SINDH	BADIN	BADIN	BHAGRA MAIMAN	0	1.6
SINDH	BADIN	SHAHEED FAZIL RAHU	AHMED RAJU	0	1.6
SINDH	BADIN	TALHAR	RAJO KHANANI	0	2.2
SINDH	BADIN	TANDO BAGO	DADA	0	2.2
SINDH	BADIN	TANDO BAGO	KHOSKI	0	2.2
SINDH	BADIN	TANDO BAGO	KHUSKI	0	2.2
SINDH	BADIN	TANDO BAGO	PAHAR MUREE	0	2.2
SINDH	BADIN	TALHAR	TALHAR	0	2.2
SINDH	BADIN	BADIN	LUWARI SHARIF	0	2.2
SINDH	BADIN	BADIN	BADIN 3	0	2.2
SINDH	BADIN	BADIN	SERANI	0	2.2
SINDH	BADIN	BADIN	KADHAN	0	2.2
SINDH	BADIN	TALHAR	PIRO LASHARI	0	2.2
SINDH	BADIN	TANDO BAGO	CHABRALU	0	2.2
SINDH	BADIN	TANDO BAGO	TANDO BAGO	0	2.2
SINDH	BADIN	BADIN	BADIN 2	0	2.2
SINDH	BADIN	MATLI	BHADHU QAMBRANI	0	2.2
SINDH	BADIN	TANDO BAGO	KHAIRPUR	0	2.33
SINDH	BADIN	MATLI	GHULAM SHAH LAGHARI	0	2.33
SINDH	BADIN	SHAHEED FAZIL RAHU	DABI	0	2.33
SINDH	BADIN	TANDO BAGO	PANGRIO	0	2.33
SINDH	BADIN	BADIN	MITHI	0	2.47
SINDH	BADIN	BADIN	BADIN 1	1	2.8
SINDH	BADIN	SHAHEED FAZIL RAHU	GHARO	0	2.8
SINDH	BADIN	SHAHEED FAZIL RAHU	TARAI	0	2.8
SINDH	BADIN	SHAHEED FAZIL RAHU	SHAHEED FAZIL RAHU	1	2.8
SINDH	BADIN	MATLI	HAJI SAWAN	0	2.8
SINDH	BADIN	MATLI	TANDO GHULAM ALI	1	2.8
SINDH	BADIN	TALHAR	SAEEDPUR	1	2.8
SINDH	BADIN	BADIN	KHALIFA ABDULLA	0	2.8

Province	Districts	Tehsils	UC	priority	weight
SINDH	BADIN	MATLI	MATLI 1	0	2.8
SINDH	BADIN	MATLI	MANAK LAGHARI	0	2.8
SINDH	BADIN	TANDO BAGO	DAI JARKAS	0	2.8
SINDH	BADIN	TANDO BAGO	KHADHARO	1	2.8
SINDH	BADIN	MATLI	NEW DAMBALU	0	2.8
SINDH	BADIN	MATLI	MALHAN	0	2.8
SINDH	BADIN	MATLI	MATLI 2	0	2.8
SINDH	BADIN	BADIN	ABDULLAH SHAH	0	2.8
SINDH	BADIN	BADIN	NANDU	1	2.8
SINDH	BADIN	MATLI	PHALKARA	0	2.8
SINDH	BADIN	BADIN	KADI QAZIA	0	2.8
SINDH	BADIN	SHAHEED FAZIL RAHU	RAHOKI	1	2.8
SINDH	BADIN	MATLI	HALIOTA	1	2.93
SINDH	BADIN	SHAHEED FAZIL RAHU	KARIO GHANOR	1	2.93
SINDH	BADIN	TANDO BAGO	KHALIFA QASIM	1	2.93
SINDH	BADIN	SHAHEED FAZIL RAHU	KHOH WAH	0	2.93
SINDH	BADIN	BADIN	MOHAMMAD KHAN BARGARI	0	2.93
SINDH	BADIN	MATLI	THARI	0	2.93
SINDH	SANGHAR	SINJHORO	KHADRO	0	1.33
SINDH	SANGHAR	KHIPRO	RONJHU	0	1.47
SINDH	SANGHAR	KHIPRO	BILAWAL HANGORJO	0	1.53
SINDH	SANGHAR	SANGHAR	SHAH SIKANDAR ABAD	0	1.87
SINDH	SANGHAR	SANGHAR	CHOTIYARION	0	1.87
SINDH	SANGHAR	JAM NAWAZ ALI	NAONABAD	0	1.93
SINDH	SANGHAR	SINJHORO	PIR SYED SABGHAT ULLAH SHAH	0	1.93
SINDH	SANGHAR	TANDO ADAM	PIRO FAQIR SHORU	0	2.07
SINDH	SANGHAR	TANDO ADAM	KUMB DARON	0	2.07
SINDH	SANGHAR	SINJHORO	PARITAMABAD	0	2.07
SINDH	SANGHAR	KHIPRO	KAMIL HANGORU	0	2.07
SINDH	SANGHAR	KHIPRO	KHORI	0	2.07
SINDH	SANGHAR	TANDO ADAM	MITHO KHOSO	0	2.2
SINDH	SANGHAR	KHIPRO	KHIPRO	0	2.2
SINDH	SANGHAR	JAM NAWAZ ALI	HOT WASAN	0	2.2
SINDH	SANGHAR	SANGHAR	KHADWARI	0	2.2
SINDH	SANGHAR	KHIPRO	KHAI	0	2.2
SINDH	SANGHAR	SHAHDADPUR	SHAHDADPUR	0	2.2
SINDH	SANGHAR	KHIPRO	JAINHAR	0	2.2
SINDH	SANGHAR	SINJHORO	JHOL	1	2.53
SINDH	SANGHAR	SHAHDADPUR	LANDO	0	2.53
SINDH	SANGHAR	SINJHORO	SHAH MARDAN ABAD	0	2.53
SINDH	SANGHAR	SHAHDADPUR	SHAH PUR CHAKAR	0	2.53
SINDH	SANGHAR	SHAHDADPUR	SARHARI	0	2.53
SINDH	SANGHAR	TANDO ADAM	MANIK THAHIM	1	2.53
SINDH	SANGHAR	SHAHDADPUR	SOMAR FAQIR HANGORU	0	2.53
SINDH	SANGHAR	SHAHDADPUR	BARHON	0	2.53

Appendix 12. Union Councils – final score by tehsil

Province	Districts	Tehsils	UC	priority	weight
SINDH	SANGHAR	SINJHORO	JAFFAR KHAN LAGHARI	1	2.53
SINDH	SANGHAR	SANGHAR	MIAN	1	2.67
SINDH	SANGHAR	JAM NAWAZ ALI	BEERANI	1	2.67
SINDH	SANGHAR	SANGHAR	KANDIARI	0	2.67
SINDH	SANGHAR	SHAHDADPUR	JATIA	1	2.67
SINDH	SANGHAR	SHAHDADPUR	GUL MUHAMMAD LAGHARI	0	2.67
SINDH	SANGHAR	SANGHAR	SETHARPIR	0	2.67
SINDH	SANGHAR	SANGHAR	KEHURI	0	2.8
SINDH	SANGHAR	SHAHDADPUR	ASGHAR ABAD	0	2.8
SINDH	SANGHAR	SHAHDADPUR	MALASI	1	2.8
SINDH	SANGHAR	JAM NAWAZ ALI	JAM NAWAZ ALI	0	2.8
SINDH	SANGHAR	SINJHORO	SINJHORO	0	2.8
SINDH	SANGHAR	KHIPRO	DHALIYAR	1	2.93
SINDH	SANGHAR	TANDO ADAM	MIR HASSAN MURREE	1	2.93
SINDH	SANGHAR	SANGHAR	KANHAR	0	2.93
SINDH	SANGHAR	KHIPRO	HATHANGU	0	2.93
SINDH	SANGHAR	SANGHAR	SANGHAR	0	2.93
SINDH	UMER KOT	KUNRI	CHAJRO	0	2
SINDH	UMER KOT	UMER KOT	CHUR	0	2
SINDH	UMER KOT	UMER KOT	FAQIR ABDULLAH	0	2.07
SINDH	UMER KOT	UMER KOT	GARIBABAD	0	2.13
SINDH	UMER KOT	UMER KOT	KHARU RO SYED	0	2.13
SINDH	UMER KOT	KUNRI	NABISAR	0	2.33
SINDH	UMER KOT	PITHORO	PITHORO	0	2.47
SINDH	UMER KOT	UMER KOT	GAPNA	0	2.6
SINDH	UMER KOT	UMER KOT	KHEJRARI	0	2.73
SINDH	UMER KOT	UMER KOT	SABHO	1	2.73
SINDH	UMER KOT	KUNRI	TALHI	0	2.73
SINDH	UMER KOT	SAMARO	PADHRIO FARM	1	2.8
SINDH	UMER KOT	KUNRI	KUNRI	1	2.8
SINDH	UMER KOT	PITHORO	SHADI PALI	0	2.8
SINDH	UMER KOT	SAMARO	SAMARO	0	2.8
SINDH	UMER KOT	KUNRI	KUNRI MEMAN	0	2.8
SINDH	UMER KOT	KUNRI	BASTAN	1	2.93
SINDH	UMER KOT	SAMARO	ARARO BHARGARI	0	2.93
SINDH	UMER KOT	UMER KOT	ATTA MUHAMMAD PALI	1	2.93
SINDH	UMER KOT	SAMARO	SAMARO ROAD	1	2.93
SINDH	UMER KOT	SAMARO	SATARYOON	1	2.93
SINDH	UMER KOT	KUNRI	SHER KHAN CHANDIO	1	2.93
SINDH	UMER KOT	PITHORO	SHAH MARDAN SHAH	1	3.07
SINDH	UMER KOT	UMER KOT	DHORONADO	1	3.07

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CD7150EN/1/10.25