



JOINT P&DD & UNICEF COUNTRY-LED EVALUATION OF THE  
CLEAN DRINKING WATER FOR ALL (CDWA) PROJECT  
(BALOCHISTAN COMPONENT)

# EVALUATION REPORT



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## ACRONYMS

|        |  |
|--------|--|
| ADP    | Annual Development Plan                                  |
| BCC    | Behaviour Change Communication                           |
| BESA   | Balochistan Engineering Services Agency                  |
| C4D    | Communication for Development                            |
| CDO    | Community Development Officer                            |
| CDWA   | Clean Drinking Water for All                             |
| CDWI   | Clean Drinking Water Initiative                          |
| DAC    | Development Assistance Committee                         |
| DHO    | District Health Office                                   |
| DRR    | Disaster Risk Reduction                                  |
| FGD    | Focus Group Discussion                                   |
| GoB    | Government of Balochistan                                |
| GoP    | Government of Pakistan                                   |
| HHS    | Household Survey   |
| HRBA   | Human Rights-Based Approach                              |
| KII    | Key Informant Interview                                  |
| M&E    | Monitoring and Evaluation                                |
| MPA    | Member Provincial Assembly                               |
| MOS    | Measure of Size  |
| NECD   | National Evaluation Capacity Development                 |
| NGO    | Non-Governmental Organization                            |
| O&M    | Operation and Maintenance                                |
| OECD   | Organization for Economic Cooperation and Development    |
| P&DD   | Planning and Development Department                      |
| PCRWR  | Pakistan Council of Research in Water Resources          |
| PHED   | Public Health Engineering Department                     |
| PME    | Programme Monitoring and Evaluation                      |
| PMERR  | Planning, Management, Evaluation, Reporting and Research |
| POL    | Petroleum, Oil and Lubricants                            |
| PPIU   | Provincial Project Implementation Unit                   |
| PPS    | Probability Proportional to Size                         |
| PSLM   | Pakistan Social and Living Standards Measurement         |
| QL     | Qualitative  |
| QT     | Quantitative   |
| RO     | Reverse Osmosis  |
| SDG    | Sustainable Development Goal                             |
| TOC    | Theory of Change   |
| ToR    | Terms of Reference                                       |
| TPV    | Third-Party Validation                                   |
| UC     | Union Council  |
| UF     | Ultra-Filtration   |
| UNEG   | United Nations Evaluation Group                          |
| UNICEF | United Nations Children's Fund                           |
| WASH   | Water, Sanitation and Hygiene                            |
| WFP    | Water Filtration Plant                                   |
| WHO    | World Health Organization                                |
| XEN    | PHED District Engineer                                   |

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# EXECUTIVE SUMMARY

## 1. Context and Background of the Evaluation

The Balochistan Clean Drinking Water for All (CDWA) evaluation was conducted as part of the National Evaluation Capacity Development (NECD) initiative, which began in 2015 when Phase II of CDWA commenced. The initiative focuses on developing and implementing effective monitoring frameworks, establishing indicators focused on the Sustainable Development Goals (SDGs) and collecting and analysing accurate data for those indicators. An effective monitoring framework will contribute significantly to the ultimate outcome of developing evidence-based policies.

Since 2015, UNICEF has been working with the Planning and Development Department (P&DD) Balochistan on monitoring and evaluation (M&E) capacity development. This evaluation contributed to that capacity development in several ways, as described in this report, including the concept and content of a Theory of Change as an integral element of an effective M&E framework.

Access to safe drinking water is both a basic need and a basic human right. Yet, water on our planet has become both scarce and impure while the demand increases continuously. Access to safe drinking water is also a critical issue in Pakistan. Despite remarkable improvements in the proportion of the population using an improved water source and an improved sanitation facility, 27.2 million Pakistanis do not have access to safe drinking water. Diarrhoea is the second leading cause of death in children under five years old. In Balochistan, between 2011 and 2015, the use of many water sources decreased, and the water supplied through drinking water sources is not always safe due to contamination from various sources. Many of the existing water sources in 2011–2012 were either unsafe at the consumer end or were non-functional.

There have been efforts by both the Federal Government and the provincial government to improve the availability of clean water in Balochistan. In 2007, the Federal Government decided to install 567 water purification plants in Balochistan at the UC level. In the initial stages the effort was led by the Environmental Protection Agency, the district government and contractors who were selected through a bidding process to construct and staff the plants. Later, responsibility for the implementation of the CDWA project shifted to the Public Health Engineering Department (PHED). The project officially began in 2008 with a target of 575 (567 + 8 additional plants) water filtration plants (WFP), including both ultra-filtration (UF) and reverse osmosis (RO) plants. The plants were modular, and four different classifications of plants were used, depending on the characteristics of the water source. Phase I of the CDWA ended in 2011, by which time only 409 UF plants and 13 RO plants had been installed, and 45 of the UF plants remained non-functional. Phase I faced many challenges, including lack of electricity, high operation and maintenance costs, political interference, and a devolution of power in 2010 which shifted responsibility for the CDWA from the Federal Government to the provincial government. In 2015, the design phase for Phase II of CDWA began, with implementation beginning in 2017. This included 85 solarized plants, 24 RO plants and 61 UF plants.

In 2011, a third-party verification exercise was carried out by Balochistan Engineering Services Agency (BESA), which identified significant issues, including that 41 per cent of the installed plants were non-functional. Since 2015, UNICEF has been working with P&DD Balochistan on M&E capacity

development under the NECD initiative. In 2015, the Government of Balochistan (GoB) asked UNICEF to support the province in developing an evaluation policy. Thus, a joint evaluation was suggested where the P&DD was supposed to select a project from the social sector annual development plan (ADP) for such an evaluation. UNICEF agreed to provide technical support for the evaluation and agreed to support a joint country-led evaluation for an ADP project within the water, sanitation and hygiene (WASH) sector.

## **2. Evaluation Purpose, Objectives and Methodology**

The overall purpose of conducting an independent and objective evaluation was to gauge the effectiveness of the CDWA project implemented by PHED in 15 districts of Balochistan, over the period 2010–2011 up to and including May 2018. Additionally, it was to inform programming decisions for improving water supply to households while demonstrating accountability to the stakeholders, drawing lessons learnt and forming recommendations to inform continuity and scale-up.

The evaluation aims to: i) measure the programme in terms of how successful it was in addressing problems related to water; ii) whether there were more effective ways of addressing the problem for different cost and iii) to build the capacity of the GoB to conduct evaluations by helping to develop a policy for the evaluation of development projects in Balochistan. The evaluation is focused only on long-term outcomes and has therefore not employed any impact evaluation methodology using experimental methods.

## **3. Theory of Change**

The evaluation was based on a Theory of Change (TOC) (see Figure 5) formulated exclusively for this assessment. The TOC was constructed through a consultative process with P&DD and PHED, and it is synchronized with the Evaluation Matrix and tools. Further development of the TOC by PHED is mandatory before continuing with the CDWA programme (see recommendation 2).

## **4. Evaluation Scope**

The evaluation explicitly responded thematically to the access to CDWA and the SDGs related to WASH, and geographically covered an appropriate sample of districts (see Section 2.7 on sampling) where WFPs have been installed. The evaluation was conducted between the months of April and June 2018. As part of the evaluation, officers of the M&E Section of P&DD and PHED have been trained on conducting high-quality evaluations.

## **5. Users of the Evaluation and Associated Dissemination**

Both P&DD and PHED have used the evaluation to inform the planning and implementation of CDWA Phase II. Overall, the evaluation will highlight and strengthen the GoB's commitment to demonstrate results, transparency and accountability through an independent and credible evaluation system appropriate to the SDG era. For UNICEF the evaluation is expected to yield analysis that informs the nature and magnitude of continued support to GoB on programme M&E, and WASH-related interventions. Donors, United Nations agencies such as WHO, IFAD, etc., and



international and domestic non-governmental organizations (NGOs) may use the evaluation findings and recommendations to inform future development interventions in Balochistan.

## 6. Evaluation Criteria, Framework and Key Questions

The evaluation has considered and followed the OECD/DAC criteria, which covers relevance, efficiency, effectiveness, outcome/impact and sustainability. Additionally, the evaluation has considered the human rights-based approach (HRBA), equity and gender. The evaluation has also focused on the results-based management approach, disaster mitigation and recovery measures adopted by the PHED and the Provincial Disaster Management Authority.

As part of the evaluation framework, two hypotheses were framed (see Section 2.6.1). The key evaluation questions listed in the ToRs (see Appendix 1) were used to guide the evaluation. The evaluators constructed an Evaluation Matrix (see Appendix 3), based on the key questions and the OECD/DAC criteria.

## 7. Methodology Overview

For this evaluation, a summative-formative methodology<sup>1</sup> was deployed with qualitative and quantitative mixed methods.

The findings are based on 45 key informant interviews (KIIs), 30 focus group discussions (FGDs), a 300 respondent household survey (HHS) and an inspection of 47 WFPs conducted in 15 districts of Balochistan. An additional six WFPs were inspected during the pilot testing of the tools. In total 674 people (51 per cent men, 49 per cent women) were met over the course of the evaluation. The fieldwork was conducted from 28 May to 6 June 2018, where the qualitative and quantitative evaluation surveys were completed between 4–8 May 2018. See Section 2.7 of the report for details of the sampling for the HHS, KIIs, FGDs and observations.

The evaluators prepared data collection tools that meet applicable national and international best practices, including UNEG/UNICEF guidelines on participatory approaches, respondent-friendly methods of data collection, human rights, equity and gender in the design, data collection and data processing stages and in the formulation of recommendations. The latter ensures ownership of the actions to be taken in the post-evaluation period (see Appendices 4a through 4f for all the tools and guidelines used). Human rights, equity and gender aspects were included in the evaluation design.

The evaluators included quality assurance approaches and methods for both qualitative and quantitative data collection, including random re-testing, spot checks, verification visits, cross-checking, independent reporting by different team members and picture verification among others. The quality assurance function was embedded into all training, supervision and review processes. The qualitative and quantitative data was validated prior to analysis and was triangulated to achieve greater clarity. All final reports were professionally developed and edited.

A three-day training workshop was conducted from 29 April to 1 May 2018. The workshop was held at the Gardenia Hotel, Quetta, and was attended by field supervisors and GoB officials. The training

<sup>1</sup> Summative evaluations are usually conducted at the end of an intervention and should produce objectively verifiable information on the project's / programme's effectiveness. Such an evaluation involves the use of quantitative methods and looks at the realization of committed outcomes or the likelihood of those materializing.

focused on a variety of topics relating to evaluations, tool development, sample framework, practical data collection and processing of data gathered; the training was delivered through multiple approaches, including discussions and exercises.

Challenges and limitations (geographic, security, cooperation, documentation, fieldwork and others) that would likely be faced by the evaluation team during the fieldwork were identified ahead of time (See Table 5) and appropriate management and mitigation measures were put into place.

## 8. Findings

The findings described in this report are based on 56 KIIs, 30 FGDs, 300 households surveyed and an inspection of 53<sup>2</sup> WFPs conducted in 15 districts of Balochistan during 4–8 May 2018.

Both of the hypotheses framed by the evaluation (see Section 2.6.1) were proved false. The subsections below summarize the key qualitative (QL) and quantitative (QT) findings of the evaluation against the OECD-DAC evaluation criteria. Please refer to Table 6 for an overview of the findings against each of the key evaluation questions.

### 8.1 Relevance

**QL:** Overall, all respondents and participants in KIIs stated that the CDWA initiative remains highly relevant, given continued water scarcity, limited rainfall and the health impacts of drinking untreated water. All voiced the need for clean water and 83 per cent of FGD participants stated that the CDWA is a dire public need.

**QT:** The original design of one plant per UC of 20,000 people was flawed to start with and between 2011–2017 the population density has increased significantly.

### 8.2 Effectiveness

**QL:** Eighty per cent of the KII and FGD responses expressed dissatisfaction with the operational and technical issues resulting in insufficient clean water supply. Major hurdles to the maintenance, operation and improvement of WFPs include the lack of funds; absence of skilled labour and trained persons at the district level; insufficient power supply; issues with water source (lack of water or issues with the infrastructure to deliver the water to the WFP); poor maintenance of infrastructure by the PHED; poor monitoring; sabotage; corruption and political issues. The technology used is appropriate to the context and is modular enough to adapt to the properties of the water source. Site selection for WFPs was compromised in some cases, partially due to political influences and the non-involvement of key stakeholders. Water testing was done until 2015, since then it has been done only rarely. The level of coordination between key stakeholders, the PHED, District Health Office (DHO) and the local government was noted as a problem. The budgeting for the operation and maintenance of WFPs has remained unclear due to insufficient documentation and

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<sup>2</sup> Comprising 47 sampled plus six for baseline purposes.

data, with most operators and even the PHED's own staff complaining about the lack of appropriate funding.

**QT:** Only 40 per cent of the WFPs were operational on 8 May 2018; 60 per cent were found to be out of order or non-functional. The PHED needs to conduct a census of all 409 plants to identify operational, out of order and non-functional plants; water testing also needs to be a part of the census. All 45 KIIs held, three per district, indicated issues with ownership, facilitation and interdependencies. Budget and utilization figures for the past five years are still awaited.

Some key elements are missing from the design and implementation of the CDWA initiative. In the area of management and advocacy, an online system for planning, monitoring, evaluation, research and reporting would be useful in installing and operating WFPs. Administrative mobilization, institutional advocacy and community advocacy (to secure community participation in supporting the operation and maintenance of WFPs) are also necessary. The capacity development of relevant staff and decision makers, Communication for Development (C4D) and Behaviour Change Communication (BCC) are necessary as well. Communication to raise awareness of the filtration process and the benefits of filtered water would help reduce distrust, increased the demand for clean water and promote healthy practices. There is also a need for gender, equity and HRBA sensitization for all, and for budgets and workplans to take account of gender, equity and HRBA.

### **8.3 Efficiency**

**QL:** Management of human resources was not satisfactory – most operators have been on contract terms for more than eight years rather than being made employees. No significant training was imparted to WFP staff. Despite these issues, there were a handful of best-performing operators. In some cases, district engineers (XENs) and local government representatives stated that they lack sufficient funding. Power outages and loadshedding result in closed plants.

**QT:** In the majority of cases operation and maintenance (O&M) does not meet international best practices in operations and maintenance. The way in which WFP staff are selected remains unclear – no pattern could be detected. All operators met highlighted problems in the timely and sufficient availability of funding. WFPs often do not have backup power supplies. Of the 19 (out of 47) operational plants, users of 15 plants state insufficient plant operation time, resulting in unmet demand for clean water.

During the desk review, the evaluators noted a number of inconsistencies in the documents available. Aside from complicating the evaluation, these inconsistencies highlight weaknesses in the documentation practices of the programme. Monitoring, as per best practices, is non-existent and much work is required in this direction.

#### **8.4 Outcomes**

- QL:** If all 409 WFPs operate as designed and are maintained as required, then the CDWA project (Phase I) will result in continual improvement in public health, particularly for women and children and the elderly.
- QT:** Quantitatively, the long-term outcomes of the CDWA cannot be identified at this stage as 60 per cent of the plants either do not operate as originally envisioned or are non-functional.
- QL:** Of the 60 per cent of household respondents who were aware of the importance of always using clean vessels, for water collection, only 57 per cent confirmed daily cleaning of such vessels. Most alarming are the 18 per cent who almost never clean their clean drinking water collection vessels. Waterborne diseases tend to increase exponentially within a household and then within the community.

#### **8.5 Sustainability**

- QL:** In KIIs, DHO and local government representatives stated that WFPs are necessary to improve the health of communities and were of the opinion that water quality remains a major issue in Balochistan; they further stated that the WFPs were designed and installed accordingly.
- QT:** In cases where the plants operate flawlessly, the users considered the intervention vital to improving the health of the community, a positive outcome of the initiative. However, a weak success rate with many non-functional WFPs undermines the notion of beneficial impact.

The sustainability of the outcomes of the CDWA intervention hinge on a number of factors: i) Ensuring a supply of water, ii) Ensuring proper maintenance and monitoring through proper coordination between key stakeholders (PHED, DHO and local governments), iii) Continued availability of water for WFPs and iv) Behaviour and attitudes of plant operators and beneficiary communities.

#### **8.6 HRBA, Gender and Equity**

- QL:** Many of the KII respondents clearly state that they were never consulted in the location of plants nor were disaster risk reduction (DRR) factors taken into account. The project appeared flexible enough to address HRBA, gender and equity concerns as they became evident, but in practice protective measures were not put in place.
- QT:** The design of the WFPs do not offer any support to improve the ease of access for the elderly, the physically challenged and for children. Five per cent of respondents underline HRBA and equity related issues, such as rude/ oppressive plant operator behaviour, particularly against women. Natural disasters were also not considered in the location and setup of most of the plants. None of the 47+6 plants inspected/ visited showed any structural measures for DRR or to mitigate the degree of loss occurring from a natural disaster. The evaluators have ensured that HRBA, equity and

gender considerations related to adult beneficiary men and women were integrated into all aspects of the evaluation.

## 9. Conclusions, Lessons Learnt and Recommendations

### 9.1 *Conclusions*

The CDWA programme's Balochistan component remains relevant to the province. However, to create a meaningful impact, the programme must i) have WFPs at the ward level and ii) account for population density. What was inherited was weakly designed to begin with, and weak programme management threatens what has been achieved. The lack of timely interventions in O&M is one significant factor, stemming mostly from improper attention by the P&DD and PHED in 2010, a fact that remains visible in the ADP allocations to date. The technology selected remains appropriate, and because of its modular nature it can be upgraded or downgraded to meet changing input water quality, implying that an active monitoring system is required. Expensive equipment and consumables will be/ are wasted due to inefficient district-level management.

### 9.2 *Lessons Learnt*

Four significant lessons emanate from the evaluation:

|                 |  |
|-----------------|--|
| <b>Lesson 1</b> | It is not enough to ONLY make accessible clean drinking water plants for a population. Related hygiene practices of the users must also be influenced through mass BCC techniques. Communicating for sustained change reigns supreme.  |
| <b>Lesson 2</b> | It is not enough to hire and deploy WFP operators and then leave them to perform without continual supervision and refresher trainings. Operator performance and behaviours must be regularly monitored and repeatedly reinforced through guidance and refresher trainings.  |
| <b>Lesson 3</b> | Never deliver an intervention and leave it to fate to operate flawlessly. It is a paramount need to closely monitor all aspects to achieve sustainable success.  |
| <b>Lesson 4</b> | The message that must be clearly understood, owned and implemented across the board is: Strong and well-articulated planning, management, evaluation, reporting and research (PMERR) is based on a trained and properly staffed PMERR Section that: <ul style="list-style-type: none"> <li>• Plans for IMPROVEMENT</li> <li>• Monitors for RESULTS</li> <li>• Evaluates for SUSTAINABILITY</li> <li>• Researches for DEVELOPMENT</li> <li>• Reports for TRANSPARENCY.</li> </ul> |

### 9.3 Recommendations

A consultative approach has been followed throughout the evaluation stages, particularly when soliciting opinions, ideas and feedback on the way forward. Please see Section 4.3 for details on the consultatively sought inputs on recommendations.

Overall careful attention is required to look at the need to redesign the planning function with PHED and allied departments. PHED needs to be seen to value a consultative approach and the promotion of the message that “What the people need is, and will remain so, the key driver” of PHED work. PHED must also demonstrate cost efficiencies and cost-benefits, and should therefore invest in closely monitoring implementation across the board. If this is influenced by political will or influential persons, then report the same with pros and cons so that lapses are dully attributed.

The key recommendations are as follows:

- 1) Take stock of ALL 409 plants and therefore slow down further developments in Phase II. The census of WFPs must cover:
  - a) All operational and non-functional issues;
  - b) Assess and address access and safety concerns of the plant users/ beneficiaries;
  - c) Retake water samples, retest and finetune operational plants.
- 2) Expand and improve the TOC to increase its future usefulness.
- 3) Redesign the planning function – START IMMEDIATELY.
- 4) Redesign annual budget to include all missing elements of management design and plan for ward-level WFPs. Solicit grants, rationalize the social workers and budget for the water testing laboratories.
- 5) Ensure water testing laboratories are present at the regional level and provincial centre;
- 6) Establish a properly staffed and trained PMERR Section and ensure that all PHED is fully made aware of the section’s mandate – START IMMEDIATELY.
- 7) Explore the value-add of community engagement, practices and procedures. Where the GoB may not opt for using NGOs it can certainly use registered community-based organizations. Community engagement can also be utilized in support of project activities to increase awareness of gender, equity and HRBA.
- 8) Reporting is weak and requires a new and invigorating boost. Rethink the need for monitoring; formulate a policy and the articulate the elements of monitoring and related data collection.
- 9) Test the capability and commitment of operators and train and retrain as much as required to ensure proper operations.



# CHAPTER 1

## CONTEXT AND BACKGROUND OF THE EVALUATION

### 1.1 Background to Clean Drinking Water in Balochistan

Access to safe drinking water is not only a basic need, it is a basic human right. “Water is not only for life, water is life” is how the United Nations Secretary-General described the importance of water. Yet, water on our planet has become both scarce and impure while demand increases continuously. Globally, 2.1 billion people lack access to safely managed drinking water services. Water scarcity is already affecting four out of 10 people across the globe (WHO, 2017). Every minute a newborn dies from infection caused by a lack of safe water and an unclean environment (WHO 2015), and 340,000 children under five die every year from diarrhoeal diseases (WHO/UNICEF 2015).

#### 1.1.1 *Situation of Pakistan*

Access to safe drinking water is also a critical issue in Pakistan. Despite remarkable improvements in the proportion of the population using an improved water source and an improved sanitation facility, 27.2 million Pakistanis do not have access to safe drinking water. According to a Pakistan Social and Living Standards Measurement (PSLM) report (2014–2015), overall, 89 per cent of the population has access to improved sources of water. Of these, 27 per cent have access to tap water, 26 per cent to a hand pump, 33 per cent to a motor pump, and 3 per cent to a dug well. The remaining 11 per cent have access to other sources. Lack of access to clean drinking water causes many health issues. According to UNICEF, in Pakistan approximately 39,000 children under five die every year from diarrhoea caused by unsafe water and poor sanitation.<sup>3</sup> Diarrhoea is the second leading cause of death in children under five years old.

According to a survey carried out by the Pakistan Council of Research in Water Resources (PCRWR) in 2011–2012, 79 per cent of the sources for water supply schemes were unsuitable for drinking. On the other hand, 88 per cent of water supply schemes were unfit at the consumer’s end. Moreover, 35 per cent of the existing rural water supply schemes were either abandoned or non-functional at that time. Contaminated water is a source of many diseases including diarrhoea, typhoid, intestinal worms and hepatitis. According to PSLM 2014–2015, of the four provinces, the highest percentage of diarrhoea cases reported was in Balochistan at 11 per cent.

#### 1.1.2 *Situation of Balochistan*

In Balochistan, between 2011 and 2015 use of such water sources has decreased with the exception of the motor pump (usage increased from 2 per cent in 2010–2011 to 16 per cent in 2014–2015). The use of tap water has decreased from 35 per cent to 33 per cent, hand pump from 10 per cent to 7 per cent, and dug well from 16 per cent to 11 per cent.

<sup>3</sup> Source: WaterAid Fact Sheet 2016 – WASH Situation in Pakistan. The number of deaths under-5 due to diarrhoea is sourced from WHO Global Health Observatory Data.

According to the PSLM survey for 2014–2015, 70 per cent of the population of Balochistan had access to sources such as tap water, hand pump, motor pump and dug well, while 30 per cent relied on other sources<sup>4</sup> (see Figure 2, “Access to water by source” later in this chapter). There is a significant gap between urban and rural populations in the availability, accessibility and safety of drinking water. The availability of water in rural areas, at 72 per cent, is less than that in urban areas, at 85 per cent. Access to water in rural areas is 59 per cent compared to 85 per cent in urban areas.

Furthermore, water supplied through drinking water sources is not always safe. Bacterial and chemical pollutant contamination exists in both surface and groundwater sources. Discharge of domestic sewage either directly or indirectly into water bodies, open defecation and agricultural run-off containing chemical fertilizers and pesticides during the rainy season are some of the usual causes of water contamination. There are four major contaminants measured in drinking water sources are: (a) bacteriological, (b) arsenic, (c) nitrate and (d) fluoride.

The GoB has made consistent efforts to improve the situation of clean drinking water in the province. Beginning as far back as 1987 when the PHED was established, the government has collaborated with numerous organizations to address the issue. Table 1 below outlines these efforts:

**Table 1: CDWA Intervention Timeline in Balochistan**

| Year | Description   | Source   |
|------|---|--|
| 1987 | PHED carved out of the Irrigation and Power Department with the objective of facilitating the urban and rural population of the province with potable water.  | Brief on Public Health Engineering Department, Presentation, 2014–2018 |
| 1996 | Provision of water to Gwadar Town from Akra Kaur Dam.   | Brief on Public Health Engineering Department, Presentation, 2014–2018 |
| 2002 | Water Supply Scheme, Nokundi, district Chaghi completed.  | Brief on Public Health Engineering Department, Presentation, 2014–2018 |
| 2006 | PCRWR studies on drinking water quality monitoring in the country reveal that water resources of Pakistan are facing four major water quality challenges: bacteriological contamination (68 per cent); arsenic (24 per cent); nitrate (13 per cent); and fluoride (5 per cent). | PSLM 2014–2015   |
| 2006 | It is decided that clean drinking water will be provided to all the villages of Pakistan.   | Third Party Validation BESA, Presentation, 2013                        |
| 2007 | Federal Government decides that 567 water purification plants will be installed in each union council of Balochistan.   | Third Party Validation BESA, Presentation, 2013                        |

<sup>4</sup> Source: CDWA IR Literature Review.

| Year | Description  | Source   |
|------|--|--|
|      | Bidding for the CDWA scheme began in July of that year.  |  |
| 2008 | Project is initiated and set to complete in nine months; 407 UF plants and six RO plants are installed.  | Third Party Validation<br>BESA, Presentation, 2013                           |
| 2010 | Bakhtiar Abad and Bhag are supplied with water from the Pat Feeder Canal through pipeline in the Kachhi Plain Phase I Project.   | Brief on Public Health<br>Engineering Department,<br>Presentation, 2014–2018 |
| 2010 | After devolution, provincial government has more authority over the CDWA project but funding is subsequently stopped. Therefore, original target of 574 cannot be achieved.    | Third Party Validation<br>BESA, Presentation, 2013                           |
| 2011 | Installation of UF plants completed.   | Project Director CDWA  |
| 2011 | A decision to carry out third party validation is made and BESA is entrusted with the job in November.   | Third Party Validation<br>BESA, Presentation, 2013                           |
| 2012 | RO plant installation starts and is stopped in 2014.   | Project Director CDWA  |
| 2012 | According to a survey carried out by PCRWR in 2011–2012, 79 per cent sources of water supply schemes are unsafe for drinking.  | Request for proposal for<br>services LRPS-2017-<br>9132217, 2017             |
| 2012 | Flooding in 12 districts of Balochistan affects 171 water supply schemes and 36 filtration plants but few are brought back to proper function.                                 | Brief on Public Health<br>Engineering Department,<br>Presentation, 2014–2018 |
| 2013 | Aftermath of earthquake in Awaran and Kech leaves 24 water supply schemes affected and restoration efforts were hindered.  | Brief on Public Health<br>Engineering Department,<br>Presentation, 2014–2018 |
| 2014 | Water supply scheme for Kharan Town based on Bunap River through gravity flow completed.   | Brief on Public Health<br>Engineering Department,<br>Presentation, 2014–2018 |
| 2014 | The CDWA project is completed, and 423 water filtration/ RO plants are installed.  | Project Director CDWA  |
| 2015 | UNICEF begins working with P&DD Balochistan on M&E capacity development under its NECD initiative.   | Request for proposal for<br>services LRPS-2017-<br>9132217, 2017             |
| 2015 | According to the PSLM survey for 2014–2015, 73 per cent of the population of Balochistan has access to sources such as tap water, hand pump, motor pump and dug well, while 30 | PSLM 2014–2015   |

| Year | Description   | Source   |
|------|---|--|
|      | per cent relied on other sources.   |  |
| 2015 | Design of Phase II of the CDWA project begins.  | Project Director CDWA  |
| 2017 | Phase II of CDWA project is initiated and includes the installation of 85 solarized plants, 24 RO plants and 61 UF plants.  | Project Director CDWA  |
| 2018 | A total of 482 plants have been installed including 60 plants from the Clean Drinking Water Initiative (CDWI, a predecessor of CDWA), 409 UF plants and 13 RO plants from CDWA. | Project Director CDWA  |
| 2025 | 100 per cent access to clean drinking water for the public is to be achieved by this year.  | Brief on Public Health Engineering Department, Presentation, 2014–2018 |

## 1.2 Object of the Evaluation: Clean Drinking Water for All Project

The Clean Drinking Water Initiative (CDWI) was the predecessor of CDWA and was initiated during President Musharraf's rule. At that time, the PHED was not involved and the main stakeholders/ implementers were the Environmental Protection Agency, district governments and contractors. Under this scheme, a total of 60 plants were installed in various districts of Balochistan.

In 2007, the Federal Government decided to install 567 water purification plants in Balochistan. Each union council (UC) would have one or more installed depending on the size of the UC. Ideally, once complete, this project would provide free, potable water for 2.85 million people (approximate) in Balochistan. For this purpose, the district governments provided the land free of cost while the project itself was carried out through the Provincial Project Implementation Unit (PPIU). The Project Monitoring Cell working under the administrative control of Secretary, PHED, was responsible for monitoring although the Federal Government remained responsible for all decision-making, which included the development of bidding documents, pre-qualification, the selection of the contractor and the awarding of work. The bid award committee, chaired by the Secretary, Ministry of Industries, Production and Special Initiatives, conducted the bidding process. The bids were scrutinized and verified by M/S NESPAK and the third-party validation (TPV) team and the process was found to be sound.

The project officially began in 2008 with a target of 575 (567 + 8 additional plants) plants under the CDWA scheme. Of these, 542 would be UF plants while 33 would be RO plants. The respective district governments would determine the sites/ locations in each UC. The chosen contractor (through reverse bidding) for UF plants was M/S GP-BIDC Islamabad while the lowest bidder for RO plants was Ever Green Lahore. However, by the end of Phase I of the CDWA scheme in 2011, only 409 UF plants and 13 RO plants were installed while 45 of those UF plants remained non-functional. The financial breakdown is as follows:

- Contract cost of 409 UF plants: Rs 812.187 million;
- Contract cost of 33 RO plants: Rs 246.236 million;
- Contract of 133 plants awaited: Rs 332.50 million; type of plant is not mentioned.

There were four classifications of plants used during this project under the two main categories mentioned above, i.e.

- For Bacteria and Nitrate (represented by X);
- For Bacteria and Fluoride (X2);
- For Bacteria and Hard Water (X3);
- For Reverse Osmosis (X4).

By the end of the first phase of CDWA, it was clear that many changes needed to be made to the implementation strategy and project design. Lack of electricity was the primary reason why many plants, although successfully installed, failed to provide clean drinking water as intended. Additionally these plants needed to be run all day in order to avoid backwash. High O&M costs plagued the plants in almost every UC, which restricted functionality and therefore reduced performance. Water contamination and inaccurate or non-existent testing for the same during M&E meant that problems were not identified as soon as they occurred and were not rectified in time. Turbidity (silt accumulation) choked filters and raised O&M costs. In addition to these issues, nazims (elected local government officials) often selected plant locations without properly determining a viable water source. Furthermore, the scattered population of Balochistan posed a challenge to service providers both in terms of supplying clean drinking water but also in the deployment of personnel. According to PHED, this problem became exacerbated by the lack of budget for vehicles and accommodation, which meant that Community Development Officers (CDOs) could not be deployed.

An interview with the senior management of PHED revealed that besides the many logistical problems, the P&DD was a constant hurdle in the implementation of social mobilization and awareness efforts. Many endeavours were refused because they would add to the cost. Similarly, many Community Development Workers (CDWs) are still working with PHED but are not being used in community mobilization activities, which are considered a “drain on resources” according to the current Project Director of the CDWA project Phase II. On the other hand, religious sentiments, especially in the rural areas, were against the project, based partly on suspicions that the water causes infertility.

In addition, the biggest hurdle for CDWA came in the form of the devolution of power in 2010. The Federal Government handed over the reins to CDWA and then stopped funding for the project. In other words, the provincial government became entirely responsible for the project both financially as well as in implementation, monitoring and control. According to the Section Chief, Foreign Funding, the absence of the Federal Government meant that the process of getting approvals and permits became less stringent, thereby allowing underperforming contractors to win bids.

In 2015, the design phase for Phase II of CDWA began after which in 2017 implementation began. This includes 85 solarized plants, 24 RO plants and 61 UF plants. After consideration of all the issues that were faced in Phase I, it was decided to move towards renewable energy in the form of solar

panels. Despite the high upfront costs, (PKR 1.0 million for UF plants and PKR 1.7 million for RO plants) it is a feasible option considering these solar systems will last at least 25 years and will reduce O&M costs by more than half. Furthermore, structures were made using prefabricated materials during Phase I but in Phase II, civil work was done using bricks and cement with wider roofs in order to support the installation of solar panels.

### **1.2.1 Programme Theory of Change**

A dedicated TOC for the CDWA programme does not exist. A TOC for the Balochistan component was also not prepared, in spite of the fact that it was already clear that many changes needed to be made to the implementation strategy and project design. Please see Section 2.2 for the evaluation TOC.

### **1.2.2 Third-Party Validation**

In May of 2011, the project implementation team decided that a TPV should be conducted for which BESA was awarded the task in November of that same year. The team visited 272 plants out of 409 and of those, 161 (59 per cent) were found to be functional while 111 (41 per cent) were found to be non-functional. Based on their observations, the plants located in urban areas were located properly in terms of water source but in rural areas, the plants were installed on the basis of availability of land and the recommendation of the nazim.

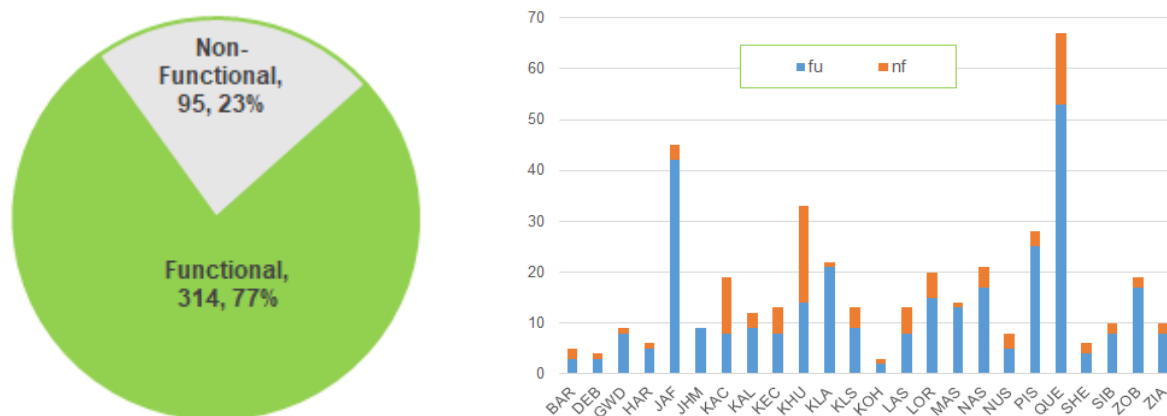
Furthermore, the team found that plants were installed as per specification except for the Monitoring System/ Server, which was not provided at the PPIU. The status of the plant (whether functional or non-functional) was based on the time of the visit. Operators were employees of the contractor (GP-BIDC) and were usually found absent; this may be explained by the frequent complaints about non-payment of salaries to the operators. In a few places the source of water, i.e. tube well, was either dried up or closed for want of repair, while in others electricity fluctuations made it impossible to run the plant. Plants were supplied with generators to address electricity fluctuations, but those were usually reported to be removed and where available were not running due to non-availability of fuel. Lastly, generally speaking, the residents of the villages were not aware of the importance of clean drinking water despite social awareness efforts by the implementation team.

### **1.2.3 Status of Plants as Reported in PHED Data**

The data sheet provided by the project authorities lists a total of 409 WFPs, distributed by district, UC and operational status. The charts below illustrate the ratio of functional and non-functional plants as 77:23 per cent; also illustrated is a similar distribution at the district level. See Appendix 4c for the complete list of plants provided by PHED.



**Figure 1: Distribution of 409 Functional and Non-Functional WFPs (PHED)**

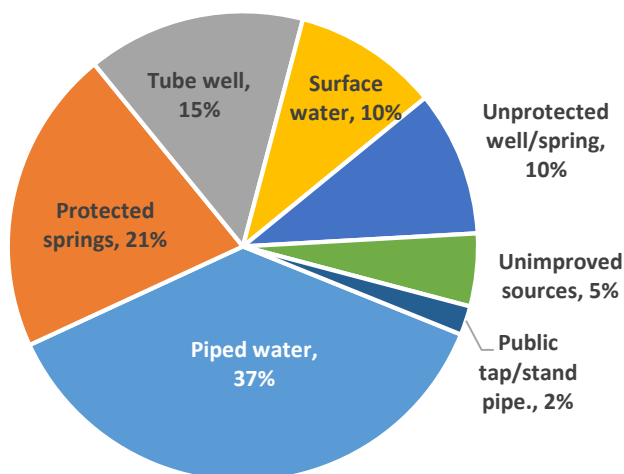


The analysis of this data reveals the following as the key reasons for non-functionality:

- Water source/shortage of water
- Irregular supply of POL for generator
- Plant motor out of order, and or pressure pump out of order
- Security and social concerns.

The PHED data also reveals that in 75 per cent of cases the main sources of water for the WFP are piped supply, protected springs and tube wells. The distribution of water sources is illustrated in Figure 2.

**Figure 2: Access to Water by Source (PHED)**



**1.2.4 UNICEF Involvement in CDWA Prior to the Evaluation**

UNICEF has been working with the P&DD Balochistan since 2015 on M&E capacity development under its NECD initiative. That initiative focuses on the need for effective monitoring frameworks, SDG-focused indicators at the output, outcome and impact levels and the collection and analysis of accurate data for those indicators. An effective monitoring framework will contribute significantly to

the ultimate outcome of developing evidence-based policies that address the SDGs and are equity-focused and gender-responsive.<sup>5</sup>

In 2015, the GoB asked UNICEF to support the province in developing an evaluation policy. The work entailed a set of preparatory steps that include building the capacity of the P&DD to conduct high-quality, equity-focused and gender-responsive evaluations. A workshop was organized in December 2015 for all the concerned officers of P&DD, Bureau of Statistics and other concerned departments involved in M&E for the same purpose. As a result of the recommendations of the workshop, and later reaffirmed by the Secretary, P&DD, and head of the SDG Unit, P&DD, a training for government officials was organized to impart practical knowledge on how to undertake high-quality evaluations. Thus, a joint evaluation was suggested where the P&DD would select a project from the social sector (ADP) for such an evaluation. UNICEF agreed to provide technical support for the evaluation and agreed to support a joint-country led evaluation for an ADP project within the WASH sector.

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<sup>5</sup> According to a conference report by the Government of Punjab, on the Role of Monitoring & Evaluation in Evidence Based Policy Making, jointly arranged by P&DD & UNICEF Pakistan in Lahore.

# CHAPTER 2

## EVALUATION PURPOSE, OBJECTIVES AND METHODOLOGY

### 2.1 Purpose and Objectives

The overall purpose of conducting an independent and objective evaluation was to gauge the effectiveness of the CDWA project implemented by PHED. Additionally, it was to inform programming decisions for improving water supply to households while demonstrating accountability to the stakeholders, drawing lessons learnt, and forming recommendations to inform continuity and scale-up.

Since improving lives is the purpose of all government programmes, the programme was measured in terms of how successful it was in addressing problems related to water and whether there are more effective ways of addressing the same problem for a different cost. The evaluation's second aim was building the capacity of the GoB to conduct evaluations by helping it (through PHED and P&DD) to develop/improve a GoB Evaluation Policy for development projects, and the alignment of the same to national and provincial commitments to the SDGs.

The evaluators have checked and reviewed the reasons for non-functionality of WFPs and identified a number of key reasons including, but not limited to, the following:

- Water source/shortage of water;
- Irregular supply of petroleum, oil and lubricants (POL) for generators;
- Plant motor out of order, and/or pressure pump out of order;
- Security and social concerns.

The evaluation has only focused on long-term outcomes and therefore has not employed any impact evaluation methodology using experimental methods.

### 2.2 Theory of Change

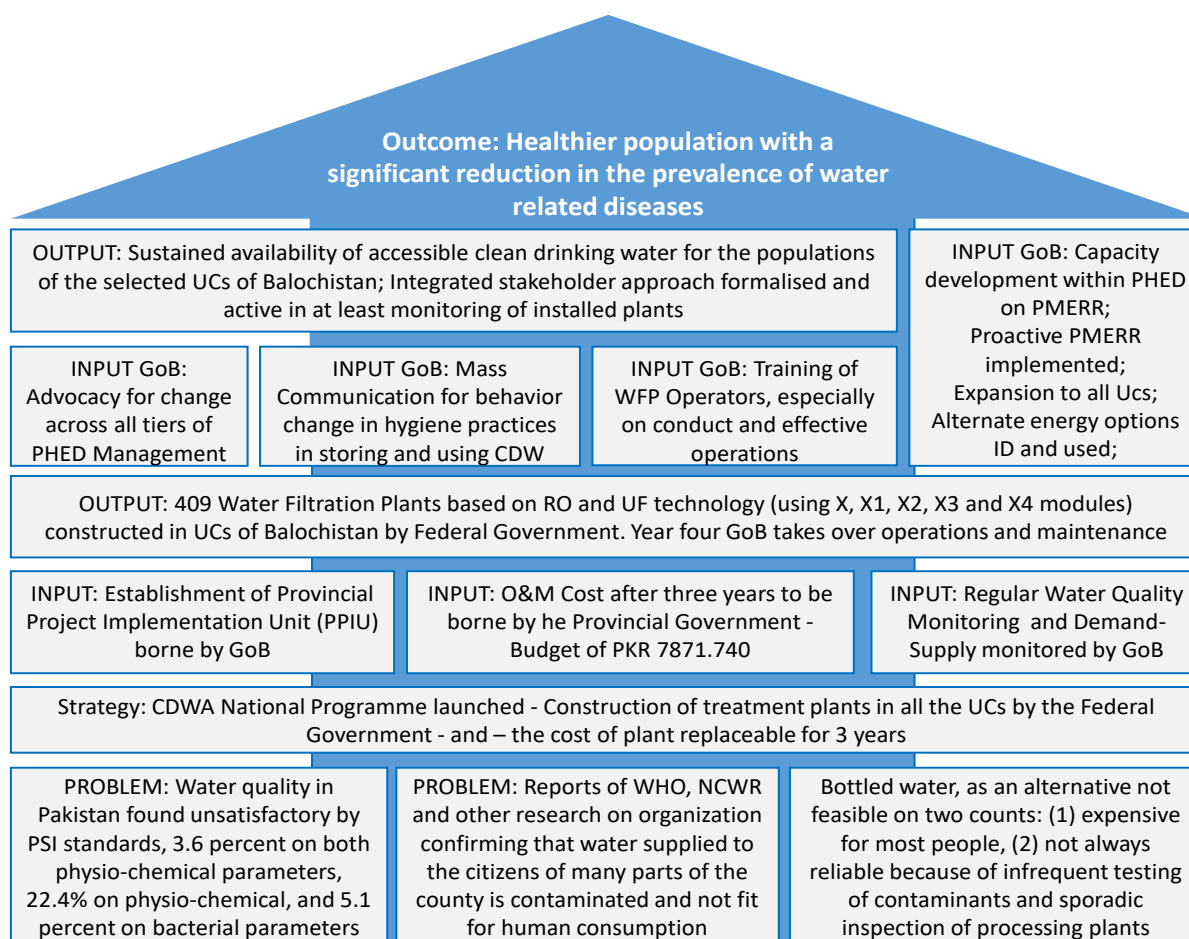
As stated earlier in Section 1.2.1, a TOC for the CDWA programme's Balochistan component per se, was never developed and thus the evaluation approach was based on a Theory of Change formulated for the purpose of the assessment. The TOC was developed in line with existing UNICEF guidelines<sup>6</sup> and is explained in detail in Figure 3. Its use in the evaluation framework and design is elaborated in Section 2.6, and Figure 5 shows how it underpins the integrated evaluation approach.

<sup>6</sup> Please refer to [http://devinfoive.info/impact\\_evaluation/img/downloads/Theory\\_of\\_Change\\_ENG.pdf](http://devinfoive.info/impact_evaluation/img/downloads/Theory_of_Change_ENG.pdf) and <https://www.unicef-irc.org/publications/747-theory-of-change-methodological-briefs-impact-evaluation-no-2.html>.

The TOC for this evaluation was constructed through a consultative process, as part of an ongoing capacity-building initiative by UNICEF for the GoB. As such it was further refined through discussions with P&DD and PHED during the evaluation, and thus:

- The evaluation TOC takes into account clean drinking water agenda of Pakistan and the Balochistan;
- International best practices for a clean drinking water initiative;
- The key questions highlighted in the evaluation ToR;
- It includes a problem statement and is divided into the strategy, input and output and outcome levels. The links between levels are also indicated;
- The Evaluation Matrix is designed to respond to the evaluation TOC;
- All the evaluation tools were especially structured to help solicit information and data to enable the evaluators to seek answers to the questions framed in the Evaluation Matrix.

**Figure 3: Evaluation Theory of Change**



**Key assumptions**

Plans are developed by GoB, with all key departments and donors involved. A multi-stakeholder engagement policy is formulated ensuring that stakeholders reflect upon appropriate prioritization for security, availability, access and delivery of clean drinking water and related hygiene practices of

users, for all citizens of Balochistan. P&DD and PHED work together in identifying sources of sustained finance.

All stakeholders, particularly P&DD, PHED, the departments of Health, Nutrition and Social Welfare, adapt their approaches, systems and procedures to use one uniform system for accurate and timely SDG-related data collection and commit to support and strengthen such systems.

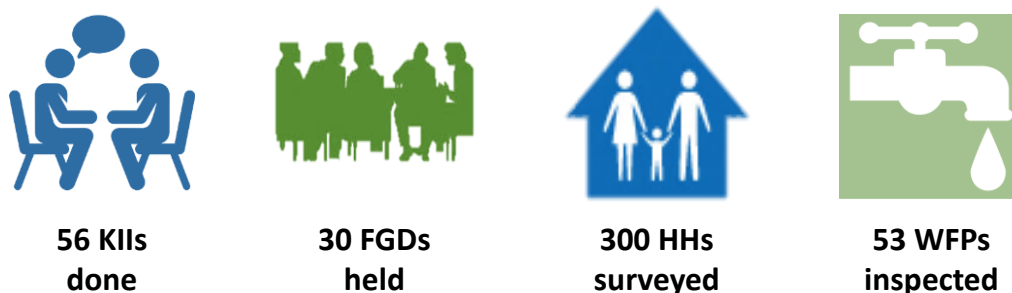
Current plans are adapted and future plans emphasize on accurate, timely and usable data and address existing data gaps, missing analytical frameworks, particularly on service-provision inequalities. Evidence-based policy formulation and implementation are recognized by GoB and promoted by PHED and P&DD.

Monitoring by PHED enables the GoB, Government of Pakistan (GoP) and key external support agencies to accurately determine “unserved” and “vulnerable” populations. Monitoring enables the identification of ineffective internal and provincial flawed practices and bottlenecks.

## 2.3 Evaluation Scope

The scope of the evaluation is limited to 15 districts in Balochistan where WFPs were installed and the implementation/operation period 2010–2011 up to and including May 2018; however, the evaluators went as far back as 2006–2007 to develop an understanding of the genesis and evolution of what is known today as the CDWA programme. The evaluation explicitly responds thematically to access provision of clean drinking water, the SDGs related to WASH, and organizational dynamics required. Sampling of districts was scientifically managed and is described in the relevant section. The quantitative and qualitative scope of this evaluation, illustrated in Figure 4, proved adequate in meeting the stated evaluation objective(s), given the available resources and time considerations. At the Inception stage, the evaluation design, framework and tools were shared and discussed. It was determined that the path to answering the evaluation questions (see Section 2.6) related to adults (men, women) beneficiaries, key district government departments and to local government representatives. Therefore children were not involved in the survey, FGDs, KIIs or site inspections.

*Figure 4: Scope of Fieldwork Completed*



The evaluation was conducted between the months of April and June 2018. Overall, the findings described in Chapter 3 are based on 45 KIIs, 30 FGDs, a 300 respondent HHS and an inspection of 47 WFPs conducted in 15 districts of Balochistan. An additional six WFPs were also inspected during the pilot testing of the tools. In total 674 people were met over the course of the evaluation. As part of the evaluation, officers of the M&E Section of P&DD and PHED have been trained on conducting

high-quality evaluations. A group of 6–8 GoB officers was selected to participate in the field staff training while an additional, dedicated one-day training was conducted concerning the tools used.

The fieldwork was conducted from 28 May to 6 June 2018, where the qualitative and quantitative evaluation surveys were completed between 4–8 May 2018. Following the fieldwork, two meetings were conducted with PHED in Quetta on the preliminary findings and recommendations.

Furthermore, the findings were corroborated by a desk review of a number of key documents, including the PC-1 for the programme; previous third-party evaluation report presentation; the 2009 plants list; 1998 and 2017 census data; media reports; WFP log books at the sites and various self-styled records maintained by a few operators.

## 2.4 Users of the Evaluation and Associated Dissemination

Overall, the evaluation will demonstrate and strengthen the GoB's commitment to demonstrate results, transparency and accountability through an independent and credible evaluation system catering to the SDG era.

Following the two consultative sessions (see Section 4.3 for a list of consultative sessions) where the findings were presented and discussed,<sup>7</sup> PHED senior management has already used the evaluation to inform the planning and implementation of CDWA Phase II. P&DD may use the products of the evaluation to address flaws identified and to inform future development planning and donor interactions.

For UNICEF the evaluation is expected to yield analysis that informs the nature and magnitude of continued support to GoB on programme M&E and WASH-related interventions.

UNICEF, to the best of the evaluation team's knowledge, has not been directly involved in the design of the CDWA programme's Balochistan component, nor in its implementation. Rather, since 2015, UNICEF has been working with the P&DD Balochistan on M&E capacity development. This evaluation contributed to that capacity development in several ways, as described in this report, including the concept and content of a TOC, as an integral element of an effective M&E framework.

The evaluation informs "Improve Access to Water and Sanitation" initiative which is one of the six UNICEF programming priorities in Pakistan. Additionally, the evaluation informs UNICEF efforts towards the achievement of the water agenda in its 2016–2030 WASH strategy.<sup>8</sup> The agenda is reproduced below.

*"To meet the new SDG agenda, UNICEF will increase its support to governments to strengthen institutions and build systems to make services reliable over time and water safe to drink. UNICEF will contribute to an effective and accountable water sector, reliable regulation for oversight, performance monitoring and sound pricing while supporting water safety planning at the community level to manage risks from the water source to the point of use."*

<sup>7</sup> On 27 June in the Office of the Secretary PHED; on 23 July in the Office of the Chief Engineer.

<sup>8</sup> Please see "Water, Results Areas, UNICEF's Strategy for Water, Sanitation and Hygiene 2016–2030".



Donors, United Nations agencies such as WHO, IFAD, etc., and international and domestic NGOs may use the evaluation findings and recommendations to inform future development interventions in Balochistan.

## 2.5 Evaluation Criteria

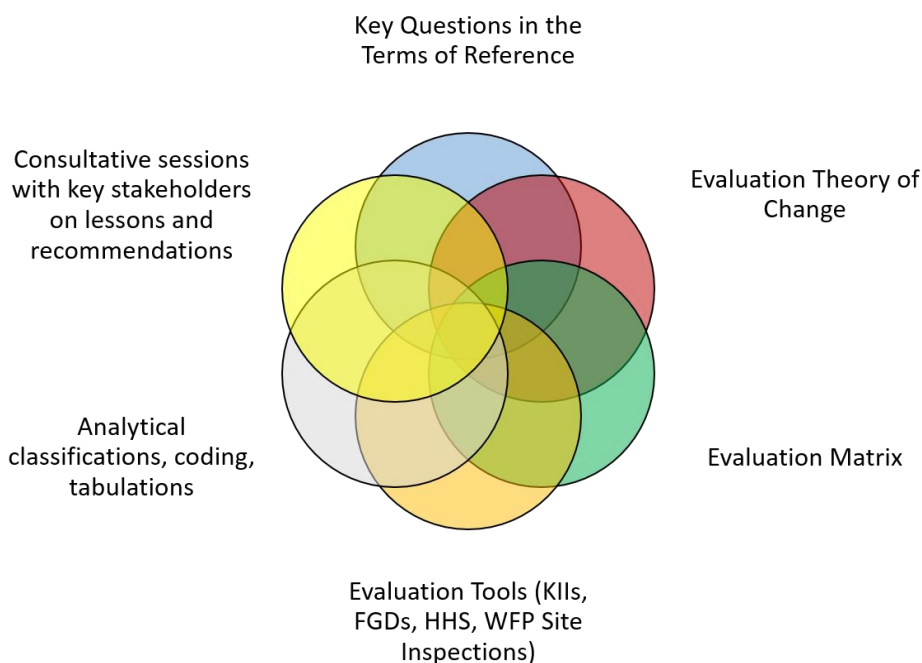
The evaluation has considered and followed the OECD/DAC criteria,<sup>9</sup> which covers relevance, efficiency, effectiveness, outcome/impact and sustainability. Additionally, the evaluation has considered HRBA, equity and gender equality applicable to the CDWA project, with focus on the accessibility of WFPs, particularly for the young, women and the physically challenged people.

Finally, working from an evaluation TOC, the evaluation has taken into account a results-based management approach deployed by PHED, or lack thereof. Attention has also been given to disaster mitigation and recovery measures adopted by PHED (and the Provincial Disaster Management Authority) for protection and recovery of WFPs since Balochistan is particularly prone to natural disasters such as earthquakes, floods and drought.

## 2.6 Evaluation Framework and Key Questions

The evaluation framework was based on the evaluation TOC and the following hypothesis framed based on a review of the PC-I and other reference materials consulted in the preparation of this evaluation report. Figure 5 illustrates the relationship and value of the TOC, Evaluation Matrix and other components in the integrated approach adopted by the evaluators.

**Figure 5: Components of the Integrated Evaluation Approach**



<sup>9</sup> The Network on Development Evaluation is a subsidiary body of the Development Assistance Committee (DAC) at the OECD. A key component of the network's mission is to develop internationally agreed norms and standards to strengthen evaluation policy and practice. Shared standards contribute to harmonized approaches in line with the commitments of the Paris Declaration on Aid Effectiveness. Its purpose is to increase the effectiveness of international development programmes by supporting robust, informed and independent evaluation. The network is a unique body, bringing together 31 bilateral donors and multilateral development agencies. Readers are encouraged to refer to the complete texts available on the DAC Network on Development Evaluation's website: [www.oecd.org/dac/evaluationnetwork](http://www.oecd.org/dac/evaluationnetwork).

### 2.6.1 Hypotheses

Two hypotheses were framed for the evaluation:

- The GoB inherited and internalized the CDWA in 2010. In so doing, the GoB has adopted all required measures to efficiently and effectively operate and maintain the 409 WFP installed in at least 15 districts in Balochistan. Therefore;
- All 409 WFP are fully functional, meeting the clean drinking water requirements of the intended populations.

### 2.6.2 Evaluation against the Key Questions

The evaluators have tried to examine and have attempted to answer, to the extent possible, the following key questions listed in the ToR (See Appendix 1):

- How relevant were the CDWA interventions to the needs and concerns of local people across various socioeconomic groups (including men, women and children from the mainstream culture and from minority communities) in the project target districts?
- How effective was the CDWA project in providing access to clean drinking water to target communities and addressing other objectives the project might have?
- Was the design of the WFPs appropriate to the context (ecology, water table, physical and chemical composition of groundwater)? Was the selection of the WFP site effectively done?
- How successful was the project in managing resources (human, material and financial resources) and ensuring that the most timely, cost-effective delivery?
- What are the long-term outcomes of the CDWA interventions aimed at providing clean drinking water?
- To what degree are the benefits of the CDWA interventions, in terms of both outcomes and impacts, expected to persist after the intervention period? What are the most important factors responsible for the achievement or failure of the intervention's overall sustainability?
- How responsive has the project been in addressing HRBA, equity and gender aspects in the design and implementation?

The evaluators constructed an Evaluation Matrix (see Appendix 3) based on the above questions. The foreseeable indicators (based either on the results framework or from best practices as applicable), tools (KIIs, FGDs, HHS, etc.) and sources of information are included. The basis for the Evaluation Matrix structure was the OECD-DAC – relevance, effectiveness, efficiency, impact and sustainability, and UNEG<sup>10</sup> criteria on HRBA, equity and gender aspects.

## 2.7 Methodology Overview

For this evaluation, a summative<sup>11</sup>-formative<sup>12</sup> methodology was deployed with qualitative and quantitative mixed methods. The workflow for the evaluation, cross-functional in its integration, is

10 In 2016, UNEG adopted the updated 2016 UNEG Norms and Standards. The ten general norms should be upheld in the conduct of any evaluation; the four institutional norms should be reflected in the management and governance of evaluation functions. The associated standards support the implementation of these normative principles.

11 Summative evaluations are usually conducted at the end of an intervention and should produce objectively verifiable information on the project's / programme's effectiveness. Such an evaluation involves the use of quantitative methods and looks at the realisation of committed outcomes or the likelihood of those materialising.

12 Formative (AKA diagnostics or developmental) evaluations are inward-looking appraisals of the processes and are conducted either (a) immediately after the design stage (i.e. the lead-up stage) of the project or programme, or (b) at a strategic point during implementation. The objective is to determine if the project's or programme's strategies are implemented as planned and to arrive at timely corrections in the design and management of implementation (prescriptive). Such evaluations usually use qualitative methods of inquiry.

illustrated in the figure below (see Appendix 4a for the full-page view). The entire workflow has been applied according to established UNICEF and UNEG guidelines.

### 2.7.1 Qualitative Assessment

Qualitative assessment was achieved through 45 KIIs with the XENs, the DHOs and the local government representatives in each of the 15 districts. Additional KIIs were conducted with PHED at the provincial levels and with the plant operators. Furthermore, 30 FGDs were held with 15 male and 15 female groups.



### 2.7.2 Quantitative Assessment

#### Assessment of water filtration plants

This mixed observation-interview based evaluation takes into account the technological variety of the plant configurations (see Table 2). Water quality at the source is the basis for configuration.

**Table 2: Assessment of Water Filtration Plants**

| Plant set up | Parameters |           |     |        |      |                  |                    |          |          |      |         |      |                  |           |        |     |
|--------------|------------|-----------|-----|--------|------|------------------|--------------------|----------|----------|------|---------|------|------------------|-----------|--------|-----|
|              | Physical   |           |     |        |      | Chemical         |                    |          |          |      |         |      | Microbiological  |           |        |     |
|              | Ph.        | Turbidity | TDS | Colour | Door | Nitrate/ Nitrite | Hardness (Ca + Mg) | Chloride | Fluoride | Iron | Arsenic | Lead | Faecal Coliforms | Coliforms | E.coli | BOD |
| X            | x          | x         | x   | x      | x    | x                | -                  | -        | -        | -    | -       | -    | x                | x         | x      |     |
| X2           | x          | x         | x   | x      | x    | -                | -                  | -        | x        | -    | -       | -    | x                | x         | x      |     |
| X3           | x          | x         | x   | x      | x    | -                | x                  | -        | -        | -    | -       | -    | x                | x         | x      |     |
| X4:Y         | x          | x         | x   | x      | x    | -                | x                  | -        | -        | -    | -       | -    | -                | -         | -      |     |

TDS: Total Dissolved Solids, Ca: Calcium, Mg: Magnesium, BOD: Biological Oxygen Demand; X: For Bacteria and Nitrate, X2: For Bacteria and Fluoride, X3: For Bacteria and Hard Water; X4:Y: RO Plants (For Hard Water and Iron)

The evaluation team verified the information described in the table above through visual observations and informal discussions with the WFP staff coupled with information obtained through the FGDs and HHS. Furthermore, the team developed and used the observation/ verification tool (see Appendix 4e) in order to assess the filtration plants used for the sampled WFPs in terms of functionality, cleanliness, equity, accessibility, operation time, staffing and location. Additionally,

water samples from 15–20 WFPs were drawn and tested for basic drinking water quality through PCRWR in Quetta.

### Household survey

Quantitatively, at the district level, for the portion of the population using the WFPs the evaluators used a household survey (HHS). The rationale behind the sampling can be found in the Sampling section. Given ground realities the quantitative tools for the HHS and plant observations have been pretested and improved before deployment for the actual survey. The tools deployed have been tried and tested in other similar



situations. Overall, the evaluation report has followed the quality standards and UNICEF adapted available guidelines for evaluation reports.<sup>13</sup>

The mixed methods of KIIs, FGDs and HHS, narrated above are not exhaustive and the evaluators have in some cases adapted, excluded or included other methods. The evaluators have prepared data collection tools that meet applicable national and international best practices, including UNEG/UNICEF guidelines on participatory approaches both in the data collection stages and in the formulation of recommendations. The latter ensures ownership of the actions to be taken in the post-evaluation period (see Appendices 4a–4f for all the tools and guidelines used).

### **2.7.3 Sampling Strategy for Quantitative Data**

#### **Universe**

The evaluation survey confined its universe to urban/rural areas of 31 districts of Balochistan province. The WFPs under CDWA project installed at UC level and the beneficiary households of these plants were the target population. Militarily restricted/ dangerous areas were out of scope of the survey.

#### **Sampling frame**

An updated and relevant sampling frame is essential for the selection of a robust and statistically representative sample from a given universe. For this purpose, the evaluators used a list of filtration plants installed comprising both functional and non-functional plants by district as a sampling frame to draw the sample by district. Mostly, filtration plant installations are at UC/ main community level. The client provided a detailed list of filtration plants showing functional/ non-functional by districts with full address and identification particulars. Table 3 shows the number of filtration plants by functional status, within each district.

<sup>13</sup> UNICEF\_adapted\_reporting\_standards\_updated\_June\_2017\_FINAL(1).pdf.

**Table 3: Number of Filtration Plants by Divisions/Districts and Status (PHED)**

| S#           | Division/ Stratum | Districts       | Total      | Functional | Non-Functional |
|--------------|-------------------|-----------------|------------|------------|----------------|
| 1            | Kalat             | Khuzdar         | 39         | 7          | 32             |
| 2            |                   | Lasbela         | 23         | 19         | 4              |
| 3            |                   | Mastung         | 18         | 4          | 14             |
| 4            |                   | Kalat           | 15         | 3          | 12             |
| 5            |                   | Washuk          | 3          | 1          | 2              |
| 6            |                   | Kharan          | 1          | 1          | 0              |
| 7            |                   | Awaran          | 3          | 1          | 2              |
| <b>Total</b> |                   |                 | <b>102</b> | <b>36</b>  | <b>66</b>      |
| 8            | Makran            | Kech/Turbat     | 21         | 8          | 13             |
| 9            |                   | Gwadar          | 13         | 4          | 9              |
| 10           |                   | Panjgur         | 2          | 0          | 2              |
| <b>Total</b> |                   |                 | <b>36</b>  | <b>12</b>  | <b>24</b>      |
| 11           | Nasirabad         | Kachhi          | 24         | 9          | 15             |
| 12           |                   | Jafferabad      | 85         | 60         | 25             |
| 13           |                   | Nasirabad       | 37         | 23         | 14             |
| 14           |                   | Jhal Magsi      | 12         | 10         | 2              |
| 15           |                   | Sohabat Pur     | 40         | 19         | 21             |
| <b>Total</b> |                   |                 | <b>198</b> | <b>121</b> | <b>77</b>      |
| 16           | Quetta            | Quetta          | 70         | 61         | 9              |
| 17           |                   | Pishin          | 34         | 23         | 11             |
| 18           |                   | Killa Abdullah  | 24         | 24         | 0              |
| 19           |                   | Nushki          | 9          | 2          | 7              |
| 20           |                   | Chagai          | 4          | 1          | 3              |
| <b>Total</b> |                   |                 | <b>141</b> | <b>111</b> | <b>30</b>      |
| 21           | Sibi              | Sibi            | 14         | 13         | 1              |
| 22           |                   | Harnai          | 7          | 7          | 0              |
| 23           |                   | Ziarat          | 12         | 10         | 2              |
| 24           |                   | Kohlu           | 7          | 5          | 2              |
| 25           |                   | Dera Bugti      | 8          | 5          | 3              |
| <b>Total</b> |                   |                 | <b>48</b>  | <b>40</b>  | <b>8</b>       |
| 26           | Zhob              | Zhob            | 22         | 19         | 3              |
| 27           |                   | Sheerani        | 7          | 2          | 5              |
| 28           |                   | Loralai         | 24         | 9          | 15             |
| 29           |                   | Killa Saifullah | 17         | 10         | 7              |

**Table 3: Number of Filtration Plants by Divisions/Districts and Status (PHED)**

| S#                 | Division/ Stratum | Districts | Total      | Functional | Non-Functional |
|--------------------|-------------------|-----------|------------|------------|----------------|
| 30                 |                   | Barkhan   | 7          | 4          | 3              |
| 31                 |                   | Musa Khel | 4          | 0          | 4              |
| <b>Total</b>       |                   |           | <b>81</b>  | <b>44</b>  | <b>37</b>      |
| <b>Grand total</b> |                   |           | <b>606</b> | <b>364</b> | <b>242</b>     |

### Stratification Plan

A stratification scheme was formulated in order to enhance the accuracy of survey results and to produce results at the desired geographical level. Districts within each administrative division level were grouped to constitute an independent stratum. Thus, there are six strata in the province. Furthermore, each division has been sub-stratified into two sub-strata based on the functional and non-functional status of filtration plants.

### Sample Size and Allocation

Sample size depends upon variability of the survey variables, reliability constraints, costs and the law and order situation etc. Keeping these factors in mind, a sample size of 47 filtration plants comprising 29 functional and 18 non-functional plants was developed based on 95 per cent level of confidence, 5 per cent margin of error and 50 per cent prevalence rate. Households suggested for beneficiaries/ household perception numbered 290.

**Table 4: Sample Size and Its Allocation by Divisions /Sample Districts/ Sample Households**

| S# | Division  | Districts      | No. of Sample Plants |       |           | Sample Households |       |
|----|-----------|----------------|----------------------|-------|-----------|-------------------|-------|
|    |           |                | Total                | Func. | Non-Func. | Total             | Func. |
| 1  | Kalat     | Khuzdar        | 4                    | 3     | 1         | 30                | 30    |
| 2  |           | Lasbela        | 3                    | 2     | 1         | 20                | 20    |
| 3  |           | Kalat          | 2                    | 1     | 1         | 10                | 10    |
| 4  | Makran    | Kech/Turbat    | 2                    | 1     | 1         | 10                | 10    |
| 5  |           | Gwadar         | 2                    | 1     | 1         | 10                | 10    |
| 6  | Nasirabad | Kachhi         | 2                    | 1     | 1         | 10                | 10    |
| 7  |           | Jafferabad     | 8                    | 6     | 2         | 60                | 60    |
| 8  |           | Sohabat Pur    | 4                    | 2     | 2         | 20                | 20    |
| 9  | Quetta    | Quetta         | 7                    | 5     | 2         | 50                | 50    |
| 10 |           | Killa Abdullah | 3                    | 2     | 1         | 20                | 20    |
| 11 | Sibi      | Ziarat         | 2                    | 1     | 1         | 10                | 10    |
| 12 |           | Dera Bugti     | 2                    | 1     | 1         | 10                | 10    |

**Table 4: Sample Size and Its Allocation by Divisions /Sample Districts/ Sample Households**

| S#           | Division | Districts | No. of Sample Plants |           |               | Sample Households |            |
|--------------|----------|-----------|----------------------|-----------|---------------|-------------------|------------|
|              |          |           | Total                | Func.     | Non-<br>Func. | Total             | Func.      |
| 13           | Zhob     | Zhob      | 2                    | 1         | 1             | 10                | 10         |
| 14           |          | Loralai   | 2                    | 1         | 1             | 10                | 10         |
| 15           |          | Barkhan   | 2                    | 1         | 1             | 10                | 10         |
| <b>Total</b> |          |           | <b>47</b>            | <b>29</b> | <b>18</b>     | <b>290</b>        | <b>290</b> |

### Sample design

The evaluation survey used a combination of two and three stage stratified sample design. Districts within each administrative division were the first stage (primary), filtration plants were the second stage (secondary) sampling units and households of beneficiaries of filtration plants were the third stage (tertiary) sampling units.

Districts within each administrative division are primary sampling units. The Probability Proportional to Size (PPS) method for sampling schemes was used to determine a fixed number of districts. Furthermore, the number of filtration plants in a district was used as the Measure of Size (MOS) for selection purposes. Due to wide variation in the size of the population under study, the PPS sampling scheme was used to draw a sample of fixed sample filtration plants from each stratum/division.

Over the course of the evaluation the sample filtration plants selected from sample districts located in union councils/communities were properly identified in consultation with local partner/ PHED staff. Upon verification of sample filtration plans, field visits were arranged in order to get the relevant information through questionnaires prepared for the purpose of this study. Both functional and non-functional filtration plants were visited with the cooperation of local government/ PHED staff. Furthermore, for the selection of Third Stage Sampling Units (households), the catchment area of each functional filtration plant is usually properly identifiable with the cooperation of staff of the UC and PHED staff and therefore, 10 households were selected randomly from the concerned community benefiting from the filtration plant.

#### **2.7.4 Quality Assurance Process**

The evaluators included quality assurance approaches and methods for both qualitative and quantitative data collection. In this regard:

- Quantitative data collection was randomly bag-tested for 5 per cent of collected forms. The field supervisors and quality assurance coordinators carried out the bag tests, spot checks and verification of visits (see Appendices 4f–4h for the quality assurance checklists/tools).
- Team Lead and Survey Office embedded a multifunctional system of cross-checking on actual data collection; independent reporting is configured between all field team members and the Field Manager. Similarly, vehicle drivers were also reporting on locations and movements. Team members were randomly asked to share current positions by communicating Google location pins with the Field Manager, Team Lead etc. Additionally, field teams recorded pictures of the WFP sites visited.



- Quality assurance function was embedded into all training, supervision and review processes. quality assurance coordinators and field supervisors received a three-day intensive training on all aspects of the fieldwork tools (KIS, FGDs and HHS), ethics, probing techniques, decision-making, perception and assumption management, etc. to ensure complete understanding of what was required (see Appendix 5 for training plan).
- Data entry was validated well before data analysis; all forms, lists, pictures were carefully processed and verified. Control tabulations were used to determine completeness and the qualitative and quantitative data was triangulated for achieving better clarity. Secondary data and information was also cross-checked.
- A consultative, interactive and participative approach has been maintained throughout the evaluation stages. Please refer to Section 4.3 for more details.
- All final reports were professionally developed and edited.

### **2.7.5 Training of Government of Balochistan Staff and Field Supervisors**

A three-day training workshop was conducted from 29 April to 1 May 2018. The workshop was attended by both field supervisors and GoB officials. The training was held at the Gardenia Hotel Quetta training hall and was attended by a total of 23 participants. (See Appendix 9 for a full list of participants).

***Figure 6: Elements of the Rigorous Training of Field Supervisors***



***Quality Control***



***Discussions & Presentations***



**Mock Exercise****Conceptual Exercise**

The training was designed and delivered by UNICEF and the evaluators in consultation with P&DD. The training focused on the following:

- Overview of the CDWA evaluation and associated evaluation questions;
- Qualitative and quantitative tool development;
- Theory and practice of KIIs, FGDs, HHS and observations;
- Sampling, structured data collection approach and, data quality;
- Management/ supervision of data collection activities;
- Tailoring the data collection approach to the context;
- Pictorial evidence collection for KIIs, FGDs and observations;
- Documentation procedures during the data collection;
- Management and security of the completed forms.

The workshop used multiple approaches including lectures, participatory discussions, reflection sessions, mock data collection activities, activities/exercises and group presentations. At the end of the training, the participants signed an undertaking confirming their awareness of their duties and responsibilities during the contract period (see Appendix 9a for the detailed consent form). The materials used in the training and provided to each field supervisor are listed in Appendix 9c.

**2.7.6 Ethics: Gender and Human Rights, Including Child Rights**

As mentioned earlier, human rights, equity and gender aspects were covered in the design of the evaluation. The evaluators have complied with prevailing UNICEF guidelines on participatory approaches and respondent-friendly methods were used during data collection, particularly where the underprivileged, marginalized, physically challenged portion of the population is concerned. In cases where women were concerned in the fieldwork, their rights as respondents, participants or stakeholders have been addressed. All adult male and female respondents were informed of the objectives of data collection and their consent to participate was sought. Similarly, the evaluators have taken into consideration the right to confidentiality of information for each respondent in the HHS and FGDs while preparing charts, tabulations and appendices for the draft and final reports. No personal information was shared and UNICEF's Programme Monitoring and Evaluation (PME) section, Quetta, was kept in the loop in case further guidance was needed.

The evaluators also sought direction from the UNEG Guidance on Integrating Human Rights and Gender Equality in Evaluation (available at <http://www.uneval.org/document/detail/980>), and the UN-SWAP Evaluation Performance Indicator (available at <http://www.uneval.org/document/download/2433>).

**2.8 Challenges and Risks**

Table 5 lists the challenges/ limitations foreseen by the evaluation team prior to the fieldwork and the mitigation measures applied in response.

**Table 5: Evaluation Limitations and Mitigation Measures**

| Category                       | Challenges / Limitations   | Management and Mitigation Measures  |
|--------------------------------|--|---|
| Geographic                     | Large geographic spread posed a challenge to the evaluation team in terms of personnel deployment.   | This was countered by deploying district-level teams. The teams were responsible for their own districts thereby reducing time wasted travelling between districts.   |
| Security                       | Probability of security threats, breaking out of fights, curfew and so on which could have affected the team's access to WFPs and hindered the collection of primary data especially for international evaluators. | The evaluators took this into account while planning and drawing sample, in consultation with UNICEF Field Office and P&DD. Given any serious security concerns, the team first consulted the security directives of UNICEF. Furthermore, the evaluators engaged more senior/mid-level local resources to compensate for any inaccessibility for international team members. In case of security issues relating to a selected centre or area, alternate centres were selected for FGDs, KIIs and assessment. |
| Participation or cooperation   | Participation from the communities concerned could have been affected by religious ideology and on how the evaluation team was perceived.  | The evaluators composed field teams consisting of experienced local staff from each district chosen in the sample. This composition encouraged participation from locals since they perceived the field teams as "insiders" and minimized the chances of misinterpretation.   |
| Secondary data / documentation | Delays in the transmission of requested documents, feedback and data from various stakeholders, which could have resulted in delays in analytical processes and the finalization of data collection tools.         | The evaluators remained in constant communication with relevant stakeholders to convey documentation and data requests and followed-up as needed.   |
|                                | Updated documentation on the past was limited and superfluous in some instances. Sometimes, it was found that the current project management was building from scratch.  | Where suitable, updated documents were not available, efforts were made to fill the gaps through qualitative means.   |
| Fieldwork                      | Due to the great distances between   | Plan was to conduct fieldwork from 9:30 am to   |

**Table 5: Evaluation Limitations and Mitigation Measures**

| Category  | Challenges / Limitations   | Management and Mitigation Measures   |
|-----------|--|--|
|           | most of the WFPs field timings could have been affected.   | 5:00 pm daily but it did vary from district to district. Field supervisors were given the freedom to adjust their field timings according to local conditions.   |
|           | The available water sampling record was out-of-date. PCRWR was explored as an option for water testing but based on the reputation of the organization in terms of testing quality, the evaluators decided to avoid using their services. Further, the distances between some of the programme districts and the lab selected in Karachi made it very difficult to transport viable samples. | To avoid wasting resources, given the insurmountable challenges described, the evaluators did not carry out the water quality testing.   |
| Any Other | Women field enumerators could have faced issues working in the field, thus hindering successful completion of HHS and FGDs.  | Male and female field team members were kept in the loop regarding potential hazards; engagement with the community was done through elders whenever possible; all ethical standards were practised (such as consent) and steps were taken to manage undue requests. |
|           | Except for two senior people in the PHED and a few line staffers, most of the people met did not have a complete institutional memory.   | Extra attention was given to requesting information from those with full institutional memory, and available secondary sources were used to bridge any gaps  |

## CHAPTER 3 | FINDINGS

### 3.1 Overview of Findings against the Hypothesis and Key Evaluation Questions

Both hypotheses framed for the evaluation are proved false:

- The GoB inherited and internalized the CDWA in 2010. In so doing, the GoB, for the Balochistan component, did not successfully adopt all required measures to efficiently and effectively operate and maintain the 409 WFP installed in at least the 15 sampled districts in Balochistan;
- Subsequently, out of 409 WFPs 47 filtration plants were sampled and found to be not fully functional; and the clean drinking water requirements of the intended populations were not met, a fact compounded by the doubling of the population density in various districts.

A summary response against all evaluation questions is presented in Table 6 below.

**Table 6: Overview of Findings Against the Key Evaluation Questions**

| Criteria      | EQ# | Evaluation Question   | Qualitative Response  | Quantitative Response  |
|---------------|-----|---|---|--|
| Relevance     | 1.0 | How relevant were the CDWA interventions to the needs and concerns of local people across various socioeconomic groups (including men, women and children from the mainstream culture and from minority communities) in the project target districts? | Highly relevant as voiced by all respondents and participants of KIIs and FGDs; All persons met emphatically voiced the need for clean drinking water to ensure better health; 83 per cent of responses from the FGD participants state that the CDWA programme is a dire need of the people. | Original design of one plant per UC or 20,000 people was flawed to start with; Since then (2011) the population density has increased (2017) significantly.                              |
| Effectiveness | 2.1 | How effective was the CDWA project in providing access to clean drinking water to target communities and addressing other objectives the project might have?  | Eighty per cent of the responses from FGDs and KIIs clearly show dissatisfaction with operational efficiency or technical problems resulting in insufficient water supply.  | Only 40 per cent of the WFPs were operational on 8 May 2018; 60 per cent were found to be out of order or non-functional. Causal elements are described in Section 3.3.1 and in Table 9. |

**Table 6: Overview of Findings Against the Key Evaluation Questions**

| Criteria          | EQ# | Evaluation Question   | Qualitative Response  | Quantitative Response  |
|-------------------|-----|---|---|--|
|                   | 2.2 | Was the design of the WFPs appropriate to the context (ecology, water table, physical and chemical composition of groundwater)? Was the selection of the WFP site effectively done?                         | Design/ technology was found to be appropriate.<br><br>Site selection criteria was compromised in some cases, mainly due to political influences. Water testing was done regularly up to 2015, after which it was rarely conducted. | PHED needs to conduct a census of all 409 plants, designating them as operational, out of order and non-functional, and accordingly update the list of 409 plants. Physical water tests need to be included in the census. Suspect quality water samples should be sent to a reliable laboratory for complete testing. |
|                   | 2.3 | From an institutional perspective, how effective were the communications between the levels of the government and the funding agency, and between the implementers and local community leaders and members? | There are clear signs of dissatisfaction with the level of coordination or its absence between key stakeholders (PHED, DHO, local government) in all 15 districts.  | All 45 KIIs held, three per district, indicated problems and issues with ownership, facilitation and interdependencies.  |
|                   | 2.4 | How effective has the P&DD been in incorporating and absorbing, within annual provincial budgets, the operational, upgrade and maintenance costs for installed plants?                                      | Not clear; most operators and in some cases even PHED's own staff complained about lack of appropriate funding.   | Budget and utilization figures for the last five years is awaited.   |
| <b>Efficiency</b> | 3.1 | How successful was the project in managing resources (human, material and financial resources) and ensuring that the most timely, cost-effective delivery.  | In terms of human resources, operators are still on contract terms, not employees. Most operators have been on contract for more than eight years.  | In the majority of cases O&M as practised does not meet international best practices.  |

**Table 6: Overview of Findings Against the Key Evaluation Questions**

| Criteria        | EQ# | Evaluation Question  | Qualitative Response   | Quantitative Response   |
|-----------------|-----|--|--|---|
|                 | 3.2 | How efficiently were the WFP staff selected, trained and retained?   | No training worth speaking of was imparted. There are a handful of good/best-performing operators and the status of their plants speaks for itself.  | It is unclear how the WFP staff were selected – no common denominator could be identified in the 47+6 plant operators met in the course of site inspections.                                    |
|                 | 3.3 | Were the budgeted recurring costs efficiently disbursed on time?   | In some cases XENs and local government representatives stated funding was insufficient.   | All operators met clearly stated problems with timely and appropriate levels of funding.  |
|                 | 3.4 | How efficiently was power outages and cuts managed to ensure appropriate water supply to intended beneficiaries? | During power outages and loadshedding the plants are closed.   | There is no power backup available in most cases. Of the 19 (out of 47) operational plants, users of 15 plants stated insufficient plant operation time, resulting in unmet clean water demand. |
| <b>Outcomes</b> | 4.0 | What are the long-term outcomes of the CDWA interventions aimed at providing clean drinking water?               | If all 409 WFPs operate as designed and are maintained as required then the CDWA project (Phase I) will result in continual improvement in public health, particularly for women and children and the elderly. | Cannot be answered at this stage since 60 per cent of the plants either do not operate as originally envisioned or are non-functional.  |



**Table 6: Overview of Findings Against the Key Evaluation Questions**

| Criteria                | EQ# | Evaluation Question   | Qualitative Response   | Quantitative Response   |
|-------------------------|-----|---|--|---|
| Sustainability          | 5.0 | To what degree are the benefits of the CDWA interventions, in terms of both outcomes and impacts, expected to persist after the intervention period? What are the most important factors responsible for the achievement or failure of the intervention's overall sustainability? | KIIs with the DHOs and local government representatives point to the fact that WFPs are necessary to improve overall health of communities they were of the opinion that water quality is a major issue in Balochistan and hence the WFPs were designed and installed accordingly. | A weak success rate disables the notion of impact; Outcome-wise where plants operate flawlessly the users considered the intervention vital for the improved health of the community.   |
| HRBA, Gender and Equity | 6.1 | To what extent were crosscutting issues such as gender equity, inclusion, climate change and social upheaval (such as natural disasters, internal displacement) considered and addressed in the design and implementation of the project?   | Many of the KII respondents clearly state that they were never consulted in the location of plants nor were DRR factors taken into account.  | In terms of ease of access for the elderly, physically challenged and for children, the plants do not offer any structural support, whatsoever; 5 per cent stress on HRBA and equity related issues related to rude/oppressive operator behaviour, particularly against women; Natural disasters were not considered in the location and setup of most of the plants; |
|                         | 6.2 | If these were not addressed in the initial planning, was the project flexible enough to include these issues as they became evident?  | The project is flexible enough. However, protective measures are not addressed.  | None of the 47+6 plants inspected / visited showed any structural measures to protect against DRR or to mitigate the loss level from a DRR.   |

### 3.2 Relevance

Overall, the CDWA programme in Balochistan remains highly relevant. The province is water-scarce, and in recent years there has been only limited rainfall, resulting in a drastic drop in the water table.

In some districts, the water table has dropped by as much as 1,000 feet. In spite of this situation, recharging the water table has never been a priority for the GoP or the GoB.

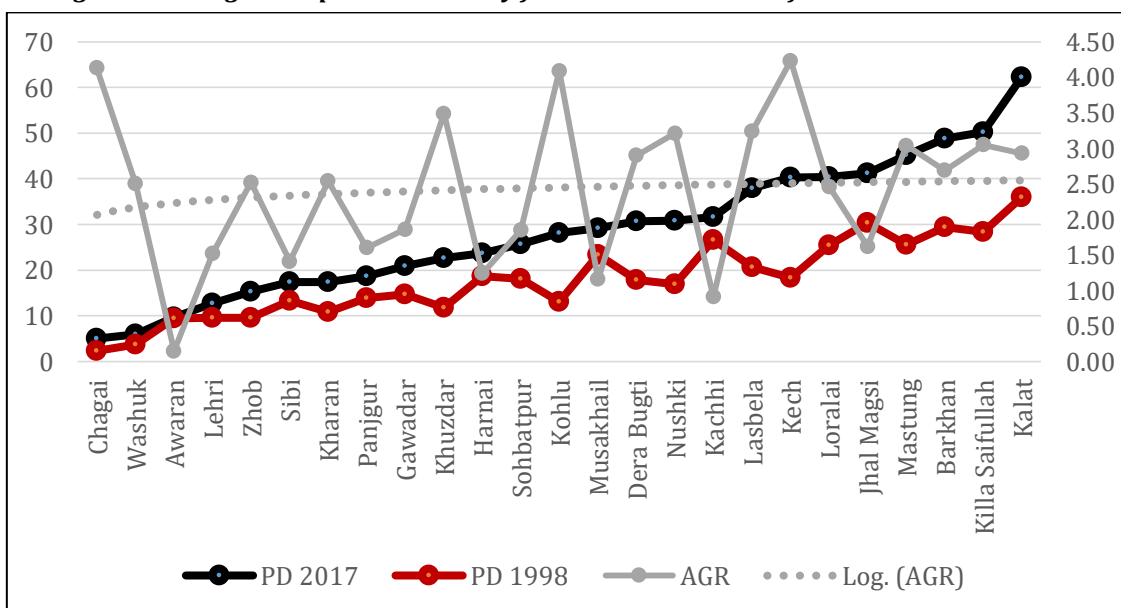
Communities without WFPs installed are generally dependent upon open ponds, surface wells, tube wells etc. for drinking water. Water from such sources is not healthy, as it often carries a number of waterborne diseases, such as tuberculosis and hepatitis, or contaminants that may cause cancer, stomach ulcers and other issues. The problem of water quality is linked to turbidity, chemical contamination and biological pollution. The health of women and children appears to be affected particularly severely by having to drink polluted water, and the health issues related to the water sources and quality appear to be continually on the rise.

Prior to the installation of the CDWA WFPs, most communities did not have access to filtered water, although the PHED did supply water in some areas. There were few actions being taken by the government, including the local governments and relevant departments, to improve the provision of safe drinking water at the community level at that time. Existing WFPs were mostly installed on a needs basis and often did not meet the demands of the increasing population.

Of the 107 qualitative responses on relevance, 90 per cent focused on the poor health of the population, while 10 per cent helped to establish a baseline picture of the period of the EFPs and on the effects of natural disasters on the availability of clean drinking water. About 83 per cent of responses from the FGD participants state that the CDWA programme is a dire need of the people.

Population density changes since 1998–2017 were not properly taken into consideration in the design of the programme. The chart and table below illustrate the increase in population density in different districts; the density doubled in some cases and increased to more than quadruple the size for Quetta, indicating the lack of attention on increasing population density by the Federal Government.

**Figure 7: Change in Population Density for Selected Districts of Balochistan 1998–2017**

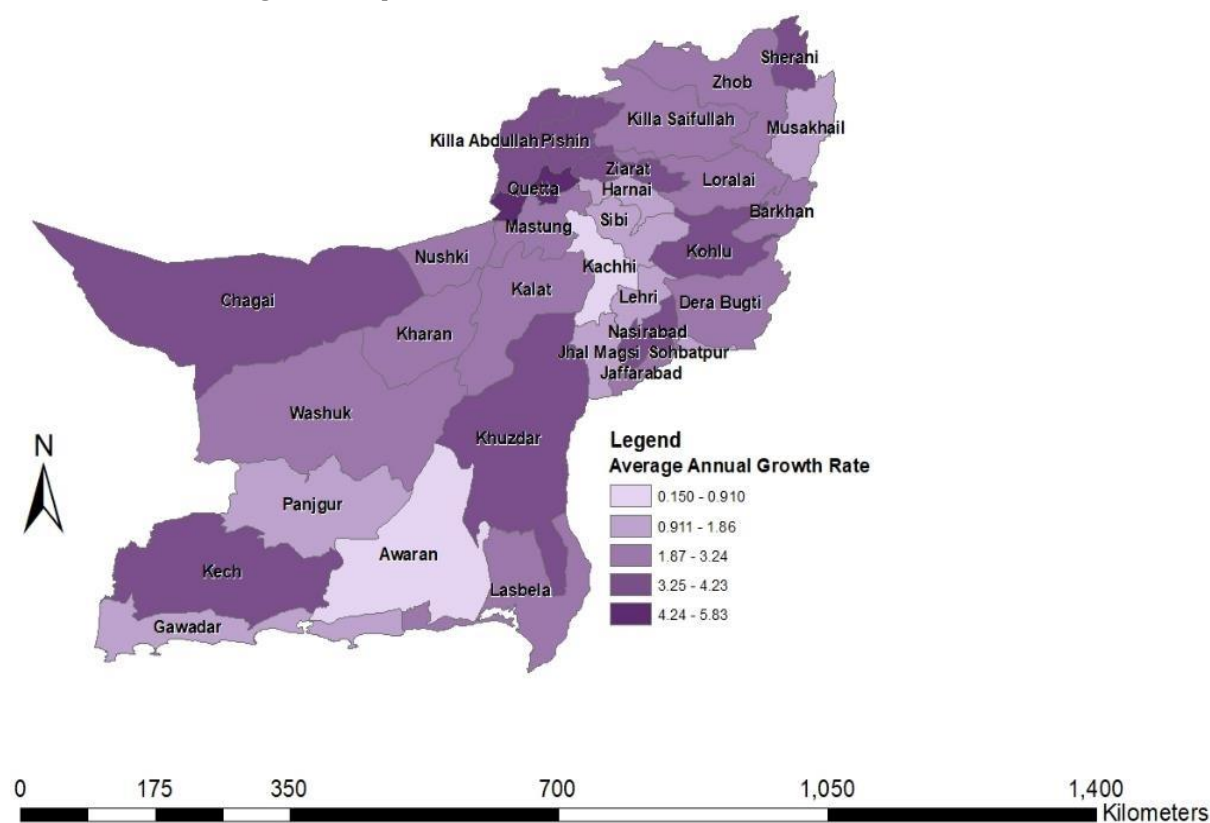


**Table 7: Change in Population Density by District**

| District       | PD 2017 | PD 1998 | AGR  | %change in PD |
|----------------|---------|---------|------|---------------|
| Pishin         | 94      | 48      | 3.58 | 195%          |
| Ziarat         | 108     | 54      | 3.67 | 199%          |
| Nasirabad      | 145     | 73      | 3.69 | 199%          |
| Killa Abdullah | 230     | 110     | 3.97 | 210%          |
| Jaffarabad     | 210     | 119     | 3.02 | 176%          |
| Quetta         | 858     | 292     | 5.83 | 294%          |

Figure 8 shows the rate at which the different districts of Balochistan are growing in population. More WFPs are needed in total, and the distribution of the WFPs should cater for the differences in growth rates in different districts.

**Figure 8: Population Growth between Censuses 1998 and 2017**



Author: Sidra Adil HTC, Date: 06/06/2018

Aside from the issue of population density, as of 2018 the total number of WFPs constructed remains insufficient to cater to 100 per cent of the population of Balochistan. Ultimately, the provision of WFPs at the ward level rather than just at the UC level is necessary to ensure proper coverage. The programme, as it was designed, was not intended to meet the needs of the entire

population and must thus be continued and expanded in the future in order to ensure a reliable supply of clean drinking water for all in the province.

It is clear that the PHED cannot financially or operationally keep pace with the demand for clean drinking water; this shortfall must be addressed through capacity-building and increased coordination and funding.

### ***3.2.1 Historical Context of Pakistan CDWA***

The Balochistan component comprises only one element of the wider Pakistan CDWA project, which had its roots in the Musharraf era (with initial planning in 2007–2008). When the Musharraf regime ended in 2008, the CDWA was already facing challenges on several fronts.

- In Punjab, CDWA was frozen in 2011 amid allegations of corruption and technical errors in project implementation.
- In Punjab, the CDWA project aimed to install a total of 3,494 WFPs, but ultimately, only 212 plants were installed by the time the project was frozen. Based on the available sources, it is not clear whether the Punjab project was cancelled after this point or whether it continued.
- According to a news article<sup>14</sup> in *Dawn*, 25 February 2014, “the Government of Khyber Pakhtunkhwa is confronted with deception, forgery, fabrication and fraud [specific to water plants]”.

The CDWA project as a whole was intended to meet the need for clean water in underserved communities around the country. The scope of the initial programme as of April 2009 aimed to build 6,585 WFPs.

While complete data on the progress of the CDWA programme around the country is not available, the evaluators have been able to compare the target and completion rates in 2011 (see Table 8). At that time Balochistan was the only province with a 70.4 per cent completion rate. The next highest was Azad Jammu and Kashmir at 68.5 per cent.<sup>15</sup>

**Table 8: Summary of the Information Available on the CDWA in Different Provinces**

| Province/<br>Area | Contractor               | No. of Filtration<br>Plants Targeted | No. of Filtration<br>Plants Installed | Completion<br>Ratio |
|-------------------|--------------------------|--------------------------------------|---------------------------------------|---------------------|
| Punjab            | AA Flowmatic Engineering | 3,494                                | 212+ 307<br>(revived CDWA)            | 8.8%                |
|                   | Syed Bhais               |                                      |                                       |                     |
|                   | KSB Pumps company        |                                      |                                       |                     |
|                   | Tauseef enterprises      |                                      |                                       |                     |
| Sindh             | M/s Green Power - BIDC   | 1,108                                | 353                                   | 31.9%               |
| Balochistan       | M/s Green Power-BIDC     | 575                                  | 405                                   | 70.4%               |
|                   | M/s Ever Green           |                                      |                                       |                     |

<sup>14</sup> “Scam of billions of rupees under probe in KP”.

<sup>15</sup> Azad Jammu and Kashmir reached 68.5 per cent completion in 2013, data from 2011 could not be found for this region.

|                        |                                 |     |     |       |
|------------------------|---------------------------------|-----|-----|-------|
| Khyber Pakhtunkhwa     | Ideal Hydrotech Systems Limited | 986 | 237 | 24.0% |
| Azad Jammu and Kashmir | AA Flowmatic Engineering        | 232 | 159 | 68.5% |

### 3.3 Effectiveness

KIIs with key officials indicated that the main hurdles to the maintenance and improvement of WFPs are the lack of funds; absence of skilled labour and trained persons at the district level; corruption and political issues.

KIIs with officials from the PHED, Health Department and local government revealed that there was little involvement from any of these stakeholders in site selection. Even the PHED stated that “very few officers” were involved in site selection. Instead, all three groups of officials stated that WFP sites were selected on a needs bases. The evaluators have found that political influence guided site selection in many cases, based on the land available and the preferences of powerful local figures. Factors like the distance to the water source or the accessibility of the WFP to the public were not always considered, often severely undermining its usefulness.

The FGD results shed light on several aspects of effectiveness. Of the 159 comments on the functionality of the WFPs, 20 per cent indicate satisfaction with the WFP while 80 per cent consider the WFPs “dead” or non-functional. Of the 127 specific opinions on the reasons for a “dead” WFP, 5 per cent indicated the absence of electricity, 4 per cent point to a lack of source water, 2 per cent identify operator performance as the main issue and 89 per cent indicate that the WFP is out of order, but the reason is not known. The highest responses on “dead plants” are from Barkhan (8 per cent), Ziarat (8 per cent), Jaffarabad (9 per cent), Sohbatpur (9 per cent), Khuzdar (10 per cent), Lasbela (10 per cent) and Zhob (10 per cent).

Of the 98 responses on the quantity and quality of the water supplied by the local WFP, 90 per cent indicate dissatisfaction with the number of plants, and the short duration of plant operation. The findings clearly show that there is a significant gap between demand and supply related to population density. A tenth of the responses express dissatisfaction with the quality of the water provided by the plant. Of the 83 responses on the quantity of water supplied, the highest number of responses are from Ziarat (6 per cent), Sohbatpur (5 per cent), Kalat (7 per cent), Dera Bugti (12 per cent), Gwadar (13 per cent), Quetta (16 per cent) and Zhob (22 per cent). These numbers further strengthen the finding that the number and distribution of the WFPs installed did not correctly account for the effects of population density.

Only 44 per cent of HHS respondents knew about the source of water supplied to the WFP in their area. A third (33 per cent) reported a “foul” smell and bad taste in the water, 96 per cent of respondents stated that the WFP in their area had broken down in the last 12 months, of whom 25 per cent were sure that there was a breakdown regularly at least once a fortnight. The fact that 52 per cent of respondents were willing to contribute financially to a properly functioning, appropriately placed WFP in their area shows the level of desire, even desperation, for clean water that exists among community members.

Based on a review of the available documents, the evaluators compiled the following list of continued issues/challenges faced by the project by comparing the PHED status data with the findings from the site inspections:

- Backwash due to power cuts;
- Lack of public awareness on the importance of using clean water;
- Obstructions in social mobilization and awareness;
- Flawed M&E practices.

Currently, there is no complaint management system to resolve problems faced by the general public in accessing clean drinking water from WFPs. Such a system would help identify operational issues faster and could also help hold plant operators accountable.

The government could improve the stability of the system by ensuring that the WFPs have access to a steady supply of water, conducting proper maintenance, providing sufficient funding and by hiring technical operators for the care, repair and maintenance of the WFPs rather than leaving it to the contractor. Cooperation and involvement by the PHED, CDWA, members of municipalities, plant operators and the community is required for the maintenance and smooth operation of the WFPs.

The technology used in the WFPs is modular and can be adjusted in response to the characteristics of the water from different sources. However, the full effectiveness of the technology is limited by various factors. Many WFPs are poorly maintained as a result of an inappropriate use of materials and parts, or as a result of negligence from operators. A lack of appropriate attention from XENs and HQ on the material used and the expertise deployed also often derails the successful deployment of the technology. Finally, the PHED was not appropriately empowered through the necessary capacity-building activities, nor was there a management information system in the PHED or awareness of the need for one.

Other factors inhibiting the effectiveness of installed plants stem from management inefficiencies, specifically:

- Unattended change in water supply quality from tube wells;
- Unattended shift in water depth of tube wells;
- Misuse of machinery and equipment by operators;
- Absent or over-burdened operators;
- Poor maintenance of infrastructure by PHED;
- Sabotage by miscreants, disputing communities;
- Poor monitoring by PHED XENs, and;
- Infrequent surveillance by PHED HQ.

### ***3.3.1 Findings Based on Site Inspections***

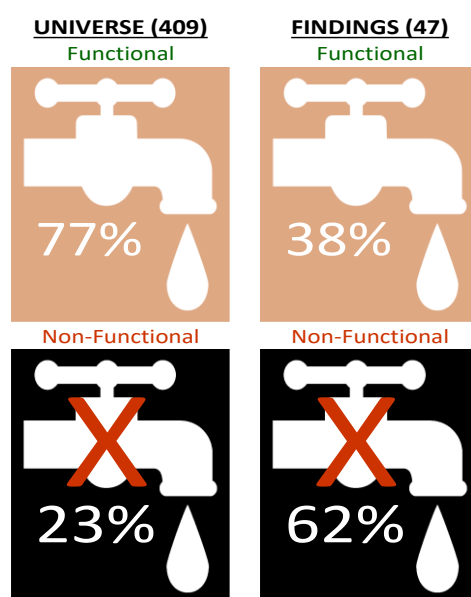
The site inspection conducted during the evaluation showed that the average age of a WFP is 8.8 years, and typical sources of water include GoB pipelines, ponds, springs, tankers and tube wells. There was a difference of 39 percentage points between the plants indicated



to be functional in the PHED data compared with the evaluation site inspection data.

Comparing the functional and non-functional WFPs, the site inspection revealed that the number of non-functional plants had increased significantly. It may be noted that the list of plants provided by PHED already identified 23 per cent plants as non-functional. Why these plants were not operationalized remains a question. However the classification proved of functional and non-functional required to be expanded at the behest of PHED to enable better understanding of the problems.

**Figure 9: WFP Plant Status in the PHED List and Sampled Plants**



A completely new classification system was developed in conjunction with PHED as shown in Table 9. This matrix presents a distribution of plants by infrastructure and operational status, recoded as per the new classification. Individual status of the 47 plants is given in Appendix 8. Figure 10 clearly illustrates the type of problems highlighted by the evaluators.

**Table 9: Distribution of Sampled WFPs by Infrastructure Condition and Operational Status**

| Code  | Operational Status   | Infrastructure Cond. |    |    | Total | Dist. within Cat. | Cat. Dist. |
|-------|--|----------------------|----|----|-------|-------------------|------------|
|       |  | GD                   | DM | NE |       |                   |            |
| 1.1   | In Operation   | 15                   | 4  | -  | 19    |                   | 40%        |
| 1.1.1 | Operational, no problems, no complaints  | 4                    | -  | -  | 4     | 21%               |            |
| 1.1.2 | In operation but duration of operation identified as short or insufficient       | 11                   | 4  | -  | 15    | 79%               |            |
| 1.2   | Out of Order   | 14                   | 8  | -  | 22    |                   | 47%        |
| 1.2.1 | Due to Electric Fault or supply  | 3                    | -  | -  | 3     | 14%               |            |
| 1.2.2 | Due to Technical Fault due to any reason including damage from natural disasters | 1                    | 4  | -  | 5     | 23%               |            |



|              |   |            |            |           |             |          |             |
|--------------|---|------------|------------|-----------|-------------|----------|-------------|
| 1.2.3        | Source Water Characteristics may have Changed | -          | -          | -         | -           | 0%       |             |
| 1.2.4        | Water Scarcity                                | 1          | -          | -         | 1           | 5%       |             |
| 1.2.5        | Water supply suspended                        | 2          | 3          | -         | 5           | 23%      |             |
| 1.2.6        | Water supply damaged                          | 1          | -          | -         | 1           | 5%       |             |
| 1.2.7        | Loadshedding                                  | -          | -          | -         | -           | 0%       |             |
| 1.2.8        | Out of order but reasons unclear              | 6          | 1          | -         | 7           | 32%      |             |
| 2            | <b>Non-functional</b>                         | 1          | 3          | 2         | 6           |          | 13%         |
| 2.1          | Never installed                               | -          | -          | -         | -           | 0%       |             |
| 2.2          | Never operated after installation             | 1          | 1          | 1         | 3           | 50%      |             |
| 2.3          | Plant destroyed, parts or whole stolen, other | -          | 1          | 1         | 2           | 33%      |             |
| 2.4          | Shutdown, due to disputes, security           | -          | 1          | -         | 1           | 17%      |             |
| <b>Total</b> |   | <b>30</b>  | <b>15</b>  | <b>2</b>  | <b>47</b>   | <b>-</b> | <b>100%</b> |
| <b>Dist.</b> |   | <b>64%</b> | <b>32%</b> | <b>4%</b> | <b>100%</b> | <b>-</b> | <b>-</b>    |

DM = Damaged / fault; GD = Good condition; NE = Non-Existent

**Figure 10: Examples of Non-Functionality and Reasons for Poor Operations**



**Operator Absence**



**Poor or No Maintainence**



**Sabotage or "Khandairs" – dead**



**Sabotage or "Khandairs" – dead**

### ***Observed best practices***

On the other hand, Figure 11 illustrates that there are some excellently maintained and operated WFPs. In terms of maintaining a clean and hygienic premises and surroundings, operational plant and logbooks, with good operator attendance and behaviour – a few of the sites visited can be classed as “superstars”. Examples of such plants are shown below. The operators of these plants should be recognized for their commitment and determination.

***Figure 11: Examples of Best Practices***

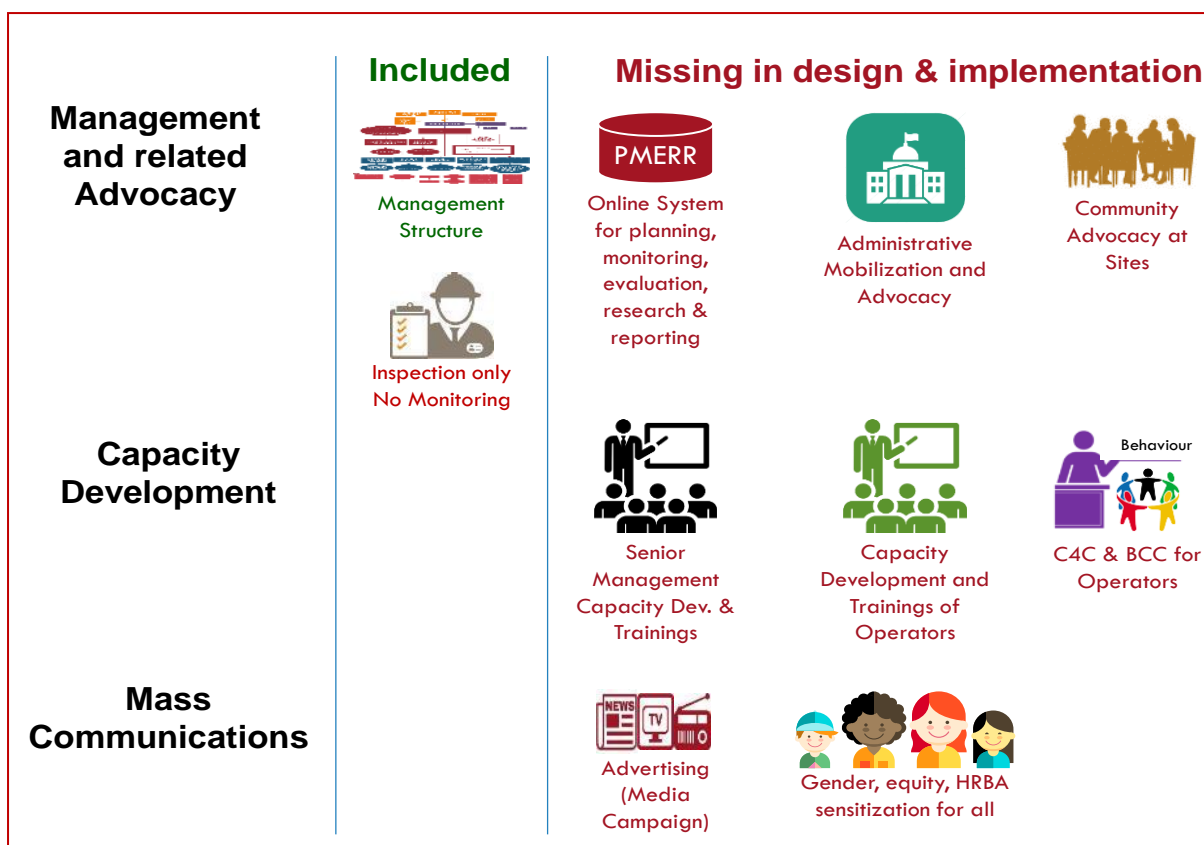


### **3.3.2 Missing Components in Design and Implementation**

#### ***Management and advocacy***

While a management structure and a system of inspections is in place, there is a need for several management and advocacy related additions to the programme. An online system for planning, monitoring, evaluation, research and reporting would greatly support future work in installing and operating WFPs. Administrative mobilization and institutional advocacy are also essential.

Figure 12: Status of Programme Management Elements



Community advocacy is also needed; despite the lack of outreach, in at least four cases, unsolicited, self-motivated community interventions ensured optimized operations and performance. Community members collected money and facilitated the operator in making timely repairs. Community members also applied pressure to improve the water supply, at a minimum to ensure that the WFP was synchronized with the defined timings of the WFP.

In some cases, community members supplied water to WFPs from their own tube wells free of cost. Twelve per cent of HHS respondents and 35 per cent in rural locations stated that local NGOs looked after the WFP in their area. Interestingly, 25 per cent of respondents attribute the installation and care of the WFP to a local NGO as well. All of the above demonstrates the potential for community outreach to secure significant support for the maintenance and operation of WFPs. Clearly, had a community advocacy component been part of the original design, the results would be better today.

**Capacity development**

Capacity development and training of the senior management of PHED, P&DD and the Health Department is a clear need. WFP operators also need capacity development and training in the operation and maintenance of WFPs. In addition, Communication for Development (C4D) and BCC are necessary to ensure that operators are properly sensitized in how to interact with their communities while operating their WFPs.

## ***Communication***

Prior to the start of the CDWA, the general public had little awareness of the filtration process and the benefits of filtered water. Some of the officials interviewed claimed that although no awareness-raising campaigns on water cleanliness were conducted in communities, people generally had a positive view of the programme. However, the evaluators found that in at least some cases, the public distrusted the WFPs and filtered water for religious reasons, out of fear that the water would cause infertility. An awareness-raising component (through posters, banners, campaigns, mass communications etc.) in the CDWA programme would have helped to reduce distrust and increase the demand for clean drinking water. Such activities could also be used to encourage healthy water storage and consumption practices among the public. There is also a need for gender, equity and HRBA sensitization for all.

## **3.4 Efficiency**

### ***3.4.1 Coordination Issues***

Coordination has remained a challenge in various aspects of the CDWA. In most cases, the absence of the PHED, Health Department and local government in site selection has affected functionality – see Section 3.1 for more discussion of this aspect. Water shortages; frequent loadshedding; the absence of backup power supplies for WFPs; political and tribal issues; the law and order situation and insufficient funding are all issues that could have been addressed to at least some extent through coordination between the PHED, Health Department and local government. The poor archiving of the historical record also affects future planning. The current programme manager faces numerous challenges in streamlining operations and in responding to improving functionality.

### ***3.4.2 Documentation Inconsistencies***

During the desk review, the evaluators noted a number of inconsistencies in the documents available. Aside from complicating the evaluation, these inconsistencies highlight weaknesses in the documentation practices of the programme, which undoubtedly hindered the implementation and monitoring of the CDWA Balochistan component.

Most sources in the interviews, ToRs and PPTs agree on the issues faced during implementation of Phase I of the CDWA project. However, the consultant for BESA third-party monitoring of CDWA did not provide any numerical data but said that the monitoring team did not test water quality and only focused on whether the plants were functioning or not. Furthermore, parts/ components were expensive and for repairs, engineers had to come from Islamabad.

PHED on the other hand stated that water quality was indeed tested by PCRWR while plant types were identified by NESPAK. Here, the PHED states that there are four types of plants used:

- X1 for Bacteria and Nitrate;
- X2 for Bacteria and Fluoride;
- X3 for Bacteria and Hard Water, and;
- Y for Reverse Osmosis plant.

The problem is that the code used in the table describing the status of 409 filtration plants in Balochistan is different. In the datasheet, X, X2, X3 and X4 were used with no indication as to their

meaning. The description given by PHED was used by cross-referencing the count of UF and RO plants with the data available concerning the total number plants of each type installed in Balochistan. Therefore, the assumption is as follows:

- X1: X (Bacteria and Nitrate)
- X2: X2 (Bacteria and Fluoride)
- X3: X3 (Bacteria and Hard Water)
- Y: X4 (Reverse Osmosis)

Secondly, PHED stated in the beginning of the interview that 409 UF plants, 13 RO plants, 100 CDWI plants and then others implemented with Member Provincial Assembly (MPA) funds from the Public Sector Development Plan make up 602 schemes under CDWA. Yet PHED later stated that only 423 plants out of 574 could be installed due to the lack of Federal Government funding after devolution in 2010. PHED senior staff also mentions that the ratio of functional to non-functional plants is 85 per cent to 15 per cent.

This is a common problem found throughout all the supporting material provided. For example, in the interview with the Management of CDWA Phase II it is stated that the project has installed 482 plants, including 409 UF plants, 13 RO plants and 60 from its predecessor, CDWI. The count for UF and RO plants coincide but there is a large difference in the number of plants carried forward from CDWI and those implemented in conjunction with other parties.

On the other hand, in a presentation (CDWA Background PPT) discrepancies exist within the presentation itself concerning the number of plants completed. First, it says 407 UF and six RO plants have been installed, then later it says 576 UF and RO plants have been installed. After that, in the summary table it says that the target was 575 plants with 409 completed and 45 completed but non-functional.

In the third presentation (CDWA Mega Projects of PHED) the target is given as 542 UF and 33 RO plants with 405 UF and seven RO plants having been installed. Furthermore, it is mentioned that 336 UF plants and seven RO plants are functional at the moment which brings the ratio to 77 per cent functional and 23 per cent non-functional. This contradicts the earlier statement by senior management of PHED.

On another note, the Section Chief Foreign Funding stated that after devolution, the budget for CDWA actually increased from PKR 5 billion to PKR 86 billion despite the Federal Government stopping funding. All other sources make no mention of this anywhere. Similarly, in the second presentation (CDWA Background Third Party Validation BESA), the breakdown of contract costs is shown in the first column of Table 10, for comparison with the breakdown of contract costs given in the third presentation (CDWA Mega Projects of PHED), shown in the second column. The last two costs are uniform but the contract cost of 409 UF plants varies by over PKR 81 million – a very large difference.



**Table 10: Comparison of Costs between TPV and PHED Reports**

|   |   |
|---|---|
| CDWA Background Third Party Validation BESA   | CDWA Mega Projects of PHED  |
| Contract cost of 409 UF plants: PKR 730.969 million                                   | Contract cost of 409 UF plants: PKR 812.187 million                                   |
| Contract cost of 33 RO plants: PKR 246.236 million                                    | Contract cost of 33 RO plants: PKR 246.236 million                                    |
| Contract of 133 plants awaited: PKR 332.50 million;<br>type of plant is not mentioned | Contract of 133 plants awaited: PKR 332.50 million;<br>type of plant is not mentioned |

Management of CDWA Phase II stated that the expected population coverage is based on a 2.5 litre per person per day assumption. According to the World Health Organization (WHO) this should be at least 7.5 litres. Similarly, population coverage estimates were based on output estimates rather than actual households provided with water.

### 3.4.3 Monitoring Inefficiencies

The fact is that monitoring – as per best practices – is non-existent. None of the monitoring data/reports were digitized, and hence no analysis can be made in hindsight. Much work is required in this direction. The inefficiencies of weak monitoring also threatens any kind of SDG-aligned reporting. Improvement in the system, as discussed under effectiveness, must cater to reporting under the SDG framework. Doing so enables PHED to relate its work to national, provincial and hence national obligations on the SDGs. Thus, doing so makes PHED more attractive for external funding. The applicable SDG targets are listed in the table below.

**Table 11: SDG Targets Relevant to PHED**

| Target #            | Target Statement   |
|---------------------|--|
| <b>3.3 (Goal 3)</b> | By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, waterborne diseases and other communicable diseases. |
| <b>3.9 (Goal 3)</b> | By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.                       |
| <b>6.1 (Goal 3)</b> | By 2030, achieve universal and equitable access to safe and affordable drinking water for all.   |

**Table 11: SDG Targets Relevant to PHED**

| Target #              | Target Statement  |
|-----------------------|---|
| <b>6.3 (Goal 6)</b>   | By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.   |
| <b>6.4 (Goal 6)</b>   | By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of fresh water to address water scarcity and substantially reduce the number of people suffering from water scarcity.   |
| <b>6.5 (Goal 6)</b>   | By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.   |
| <b>6.6 (Goal 6)</b>   | By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.  |
| <b>6.a (Goal 6)</b>   | By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies.                                       |
| <b>6.b (Goal 6)</b>   | Support and strengthen the participation of local communities in improving water and sanitation management.   |
| <b>11.5 (Goal 11)</b> | By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations. |

Improvement in monitoring should be a three-pronged strategy; the first is to formulate structured tools; the second is to develop a Monitoring Information System based on the tool, including a dashboard for the various users groups; the third is to build the capacities of existing staff and the proposed community-based organization. *At no stage should the value of effective monitoring be underestimated.*

*Legislative and Best Practice Framework:* Like the SDGs PHED must adhere to a set of *national and provincial policies, laws, strategies and standards*. This subscription entails that reporting be so aligned. Doing so enables and empowers PHED to function effectively under the law. The integrated matrix below provides a framework of laws applicable to the operations of PHED. It also highlights the relevance of each law against various PHED departments and focuses on key interlinkages. This, however, is not an exhaustive review of laws and the responsibility falls on all departmental managers to keep up-to-date with relevant laws and disseminate the information to relevant staff. In addition, where necessary, managers will initiate information seminars for employees and workers to familiarize them with the basics of this legislative framework. All managers are advised to carefully review and understand the extent to which such laws apply. The proposed PMERR section should be responsible for the complete interpretation of these instruments and the trainings of managers.



**Table 12: Legislative and Best Practice Framework Applicable to PHED**

| S#                                  | Applicable Policies, Laws and Standards                       | Operations |     |    |     | PMERR |    |    |    |     | FIN | Support |     |
|-------------------------------------|---|------------|-----|----|-----|-------|----|----|----|-----|-----|---------|-----|
|                                     |   | OPS        | HSE | PM | LAB | PL    | ME | RP | RS | MIS |     | PRM     | HRM |
| <b>POLICIES</b>                     |   |            |     |    |     |       |    |    |    |     |     |         |     |
| 1                                   | National Environmental Policy, 2005                           | X          | X   | X  | X   | X     | X  |    | X  |     | X   | X       | X   |
| 2                                   | National Sanitation Policy, 2006                              | X          | X   | X  | X   | X     | X  | X  | X  |     | X   | X       | X   |
| 3                                   | National Drinking Water Policy, 2009                          | X          | X   | X  | X   | X     | X  |    | X  |     | X   | X       |     |
| 4                                   | Pakistan Labour Policy, 2010                                  | X          | X   | X  | X   | X     |    |    |    | X   | X   |         | X   |
| <b>LAWS</b>                         |   |            |     |    |     |       |    |    |    |     |     |         |     |
| 5                                   | Pakistan Environmental Protection Act, 1997                   | X          | X   |    |     | X     | X  | X  | X  |     | X   | X       | X   |
| 6                                   | National Environmental Quality Standards, 1997                | X          | X   |    |     | X     | X  | X  | X  |     |     |         |     |
| 7                                   | Drinking Water Quality Standards, 2008                        | X          | X   | X  | X   | X     | X  | X  | X  |     |     |         |     |
| 8                                   | Balochistan Local Government Act, 2014                        | X          |     |    |     | X     | X  |    |    |     |     |         |     |
| 9                                   | Balochistan Environmental Protection Act, 2014                | X          | X   |    |     | X     | X  | X  | X  |     | X   | X       | X   |
| 10                                  | ESTACODE (Edition-2015)                                       |            |     |    |     | X     |    |    |    |     |     |         | X   |
| 11                                  | Pakistan Employment and Labour Law 2017                       | X          | X   |    |     | X     |    |    |    |     | X   | X       | X   |
| <b>BEST PRACTICES AND STANDARDS</b> |   |            |     |    |     |       |    |    |    |     |     |         |     |
| 12                                  | OSHA 29 CFR 1910  | X          | X   |    | X   |       | X  | X  |    |     |     | X       |     |
| 13                                  | ISO 17025:2005  | X          | X   |    | X   |       | X  | X  |    |     |     | X       |     |
| 14                                  | ISO 14001:2015  | X          | X   | X  | X   |       | X  | X  |    |     |     | X       |     |
| 15                                  | ISO 9001 Total Quality Management                             | X          | X   |    | X   |       |    |    |    |     |     |         |     |
| 16                                  | WHO Guidelines for Drinking Water Quality (4th Edition, 2011) | X          | X   |    | X   | X     | X  | X  | X  |     |     |         |     |

**Table 12: Legislative and Best Practice Framework Applicable to PHED**

| S# | Applicable Policies, Laws and Standards  | Operations |     |    |     | PMERR |    |    |    |     | FIN | Support |     |   |
|----|--|------------|-----|----|-----|-------|----|----|----|-----|-----|---------|-----|---|
|    |  | OPS        | HSE | PM | LAB | PL    | ME | RP | RS | MIS |     | PRM     | HRM |   |
| 17 | Pakistan National BCC Strategy and Action Plan for Safe Drinking Water, Sanitation and Hygiene 2010–2015 | X          | X   |    |     | X     | X  |    |    |     |     |         |     | X |
| 18 | Sustainable Development Goals  | X          | X   | X  | X   | X     | X  | X  | X  | X   |     |         |     | X |

**LEGEND:** FIN = Financial; HRM = Human Resource Management; HSE = Health, Safety & Environment; LAB = Laboratory; ME = Monitoring & Evaluation; MIS = Monitoring Information System; OPS = Operations; PL = Planning; PRM = Procurement Management; PM = Project Management; RES = Research; RP = Reporting

*Note: OSHA 29 CFR 1910 standards requiring provision of Personal Protective Equipment (PPE)*

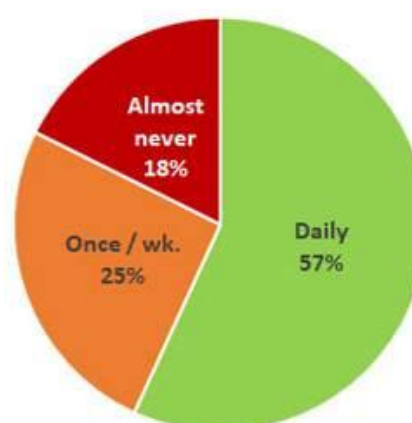
### 3.5 Outcomes

The overall outcome of the CDWA programme's Balochistan component can be summarized as follows: the water produced by plants that operate flawlessly, is successfully improving the health of community members, but for a variety of reasons, the programme is not meeting the needs of 100 per cent of the population.

One significant factor that contributes to dissatisfaction, and also to some extent, the higher incidence of water-related illnesses, stems from a failure to use clean vessels to collect water from the operating WFPs. As Table 13 shows, 33 per cent of respondents were unaware if vessels were cleaned, if at all.

The pie chart in Figure 13 illustrates the practices followed by the households of the respondents who were aware of vessel cleaning practices. Of the 66 per cent of respondents who were aware, only 57 per cent confirmed daily cleaning of vessels. Most alarming are the 18 per cent who almost never clean their clean drinking water collection vessels. This fact is alarming since waterborne diseases tend to increase exponentially within a household and then within the community.

Table 13 presents the distribution of cleaning water collection vessels by type of vessel used. Most people tend to use jerry can or bottles to fetch water from the WFPs. Where jerry cans offer a somewhat better option for such water collection, the repeated use of bottles, especially of plastic can be detrimental to health. Investing in BCC through posters and through mass media communication channels has the potential to improve vessel cleaning practices.

**Figure 13: Frequency of Vessel Cleaning**

**Table 13: Practice of Cleaning Water Collection Vessels by Type of Vessel Used**

| Vessel Used to Collect Water |              | Vessel Cleaning Practice |              |                 |            |            |             | Total     |              |
|------------------------------|--------------|--------------------------|--------------|-----------------|------------|------------|-------------|-----------|--------------|
|                              |              | 99                       | 1            | 2               | 3          | 4          | 5           |           | 6            |
|                              |              | <i>Don't Know</i>        | <i>Daily</i> | <i>2-3 days</i> | <i>Wk.</i> | <i>Mon</i> | <i>Occ.</i> |           | <i>Never</i> |
| 1                            | Bottle       | 1                        | 24           | 5               | 1          | 5          | 6           | 10        | 52           |
| 2                            | Jerry can    | 3                        | 63           | 26              | 2          | 5          | 3           | 2         | 104          |
| 3                            | Clay pitcher | 2                        | 15           | 5               | 3          | -          | -           | 1         | 26           |
| 4                            | Other        | -                        | 1            | -               | -          | -          | -           | 1         | 2            |
| 99                           | Don't Know   | 96                       | 13           | 8               | 2          | -          | -           | 3         | 122          |
| <b>Total</b>                 |              | <b>102</b>               | <b>116</b>   | <b>44</b>       | <b>8</b>   | <b>10</b>  | <b>9</b>    | <b>17</b> | <b>306</b>   |
|                              |              | <b>33%</b>               | <b>38%</b>   | <b>14%</b>      | <b>3%</b>  | <b>3%</b>  | <b>3%</b>   | <b>6%</b> | <b>100%</b>  |

As mentioned earlier under effectiveness, an opportunity exists to significantly increase the overall output of clean water with minimal effort thus increasing significantly the outcome potential. By increasing operational timings and ensuring that water and electricity are available, water output can be increased.

Another opportunity is to immediately address plants that were installed but never operated yet are in good condition. Finally, some plants are fully functional but simply do not have sufficient water to operate (either because the water supply is suspended or damaged). Organizing a reliable water supply to these plants would also be a cost-efficient way to increase supply.

### 3.6 Sustainability

In KIIs, some PHED officials suggested that WFPs are the only sustainable solution through which public demand can be fulfilled, provided that the plants are regularly operated. However, the officials noted that plants currently installed are not durable enough for long-term operations, which is why they often get choked; they also do not meet the requirements of the whole area. Larger filtration units that produce 20,000 gallons would both meet the needs of the community and be suitable for operating over longer periods of time. Where the volume demand is unrealistic larger capacities or more operation time is certainly a plausible demand. Since in most cases spaces is limited the only solution is to ensure longer operational time.

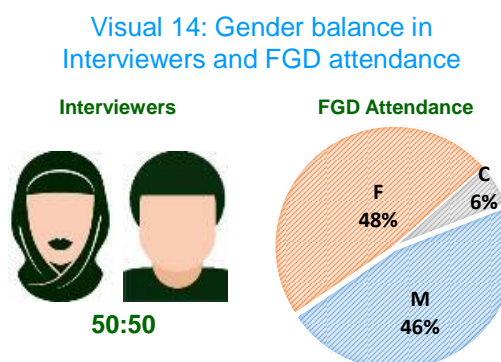
Ensuring that proper maintenance and effective (real-time) monitoring systems are in place is vital for the sustainability of the programme. One Health Department official interviewed emphasized that proper coordination and integration between the PHED, P&DD and the Health Department is necessary, with all stakeholders taking responsibility for the sustainable management of the WFPs. The official further noted that such coordination is not currently in place. By and large similar comments were made by most of the DHOs and local government representatives.

Other factors crucial to sustainability include the continued availability of water for the WFPs, and the behaviour and attitudes of community members and plant operators. Both require improvement.

Last but not least, only a healthy network with three key departments – PHED, Health and local government – duly supported by P&DD can promise a good chance of sustainability. PHED will need to take the central role here. Achieving a symbiotic relationship between departments ensures the same level of coordination and intra-district support will seed itself and mature within the districts.

### 3.7 HRBA, Equity and Gender

The evaluators have ensured that HRBA, equity and gender considerations were integrated into all aspects of the evaluation. All community-level contacts through the HHS and the FGDs involved male and female respondents and were handled by both male and female (50:50 ratio) interviewers. As the majority of respondents at the household level were men, cultural restrictions and norms were followed in this case: i.e. only men were interviewed, FGDs however, were held equally with men and women. In one case in Quetta, cultural inhibitions were overcome and combined FGDs were conducted with both male and female participants. Consent for participation was obtained from all respondents/participants and was recorded. All UNEG, UNICEF and cultural norms were followed without prejudice or inhibitions.



The evaluators identified a number of gaps in the compliance of the programme with HRBA, equity and gender concerns. At most WFPs, the infrastructure was inappropriate for the elderly, the physically challenged, women and children. Comfortable and safe access to the plant's outlet area was inhibited, with poor or no consideration for the difficulties faced by the groups mentioned: simple features such as handrails to help the elderly and the physically challenged are missing. These are not just oversights of implementation, rather, these aspects were simply not considered during the design stage. Furthermore, overflow and backwash drains are poorly structured and in most cases outflow simply collects in ditches or low-lying parts of the plant vicinity; this gives rise to vector infestations and diseases related to stagnant water and hence poses a threat to the communities of the area. In some cases the plant is situated along busy roads or beside municipal dumps.

At some sites, cages were installed to protect the outlet from vandalism but this also has the negative side effect of disabling women's access to taps during the operation of the plant. Only in a few cases do the cage gates open up completely, and the access is only provided through a small opening. This prevents women, children and the physically challenged from using the tap, particularly when a male is filling water at the opening. In a few cases, the evaluators identified cases where plant operators were found to misbehave with women, either through scolding them or abusing them. This points to poor operator selection and training and underlines the need for an effective complaint reporting mechanism.

The site selection of the WFPs in terms of the water source used and the location of the plant sometimes did not take into consideration traditional practices, in particular those related to women's limited access to public spaces, and/or limitations on waiting a long time to do so, and therefore prevented women from accessing the plants in some locations.

The worst case found during the evaluation was at one site in Quetta on Patel Road. This plant is a biological hazard. The site was found to be infested with rats, including dead ones. The entire site was poorly managed, particularly the outlet area which would challenge any person attempting to safely access the water, not least due to the risk posed by the garbage dump adjoining the plant. The existence of this site demonstrates the complete lack of coordination between the local government, the municipal authorities, the DHO and the PHED.

## CHAPTER 4

# CONCLUSIONS AND RECOMMENDATIONS

The conclusion and corresponding lessons and recommendations are formulated based on the consultations held with the KII respondents, FGDs and based on observations made during site visits and discussion with the operators.

### 4.1 Conclusions

Without a doubt, the CDWA programme's Balochistan component remains relevant to the province.

- To be able to have a chance of creating a meaningful impact the programme must be redesigned to provide WFPs at the ward level instead of the showcase level of the UC. Initial flaws of ignoring population density and potential growth rate seriously hamper stable operations and maintenance.
- What was inherited was weakly designed to start with, yet what was achieved in terms of the 409 initial installations is threatened by weak programme management.
- Lack of timely interventions in O&M is one significant factor. However most of the gaps in the current state of affairs stem from inappropriate handing over and taking over of complete responsibilities at the implementation stage; the subsequent struggle to just keep pace points to improper attention at the P&DD and PHED level in 2010, a fact that remains visible in ADP allocations to date.

The technology selected remains appropriate for the objectives set and because of its modular nature it can be upgraded or downgraded to meet changing input water quality. This implies that an active monitoring system is required; Expensive equipment and consumables will be/are wasted due to inefficient district-level management.

All aspects of programme management need improvement; some radical and some in terms of ownership and approach. This is vital since there has been:

- No attempt to realign WFP installations at the ward level instead of the dictated and inherited UC level.
- No periodic and structured provincial review meetings; no usable database or any similar repository for informed decision-making.
- Unsatisfactory or inefficient monitoring, fixated on polarized type inspections. This vital management tool should be backstopping oriented.
- No attention to alternate power supply.
- No regularization of operators, which leads to duality in their livelihood pursuits. No trainings or refresher trainings for operators.
- No involvement of local CBOs/ NGOs to aid monitoring, and responsible of facilities use by communities and as a reliable conduit for complaint registration and processing.
- Irregular and inefficient water quality monitoring/testing and thus ineffective planning. This was regularly done in the past, but not anymore.

- No attention to the battery of policies, laws and best practices nor to SDG obligations.

Sustainability of the CDWA Balochistan component appears to be at risk; yet remedial measures can effectively put the programme back on track and hence convert it into a sustainable success. To this end several observations can be made on the basis of the site inspection data. An opportunity exists to significantly increase the overall output of clean water with minimal effort; 79 per cent of operational plants are working for short or insufficient periods of time, below their true capacities. By increasing operational timings and ensuring that water and electricity are available, water output can be increased. Another opportunity is to immediately address plants that were installed but never operated yet are in good condition. Finally, some plants are fully functional but simply do not have sufficient water to operate (either because the water supply is suspended or damaged). Organizing a reliable water supply to these plants would also be a cost-efficient way to increase supply.

There was clearly a wide gap in necessary advocacy at the appropriate levels of government and stakeholders, which could have strengthened programme delivery and improved chances of sustainability. Key linkages must be formed with the Department of Health and local government.

## 4.2 Lessons Learnt

Four significant lessons emanate from the evaluation:

- **Lesson 1:** It is not enough to ONLY make accessible clean drinking water plants for a population. Related hygiene practices of the users must also be influenced through mass BCC techniques. Communicating for sustained change reigns supreme.
- **Lesson 2:** It is not enough to hire and deploy WFP operators and then leave them to perform without continual supervision and refresher trainings. Operator performance and behaviours must be regularly monitored and repeatedly reinforced through guidance and refresher trainings.
- **Lesson 3:** Never deliver an intervention and leave it to fate to operate flawlessly. It is paramount to closely monitor all aspects of its sustainable success.
- **Lesson 4:** The message that must be clearly understood, owned and implemented across the board is: A strong and well-articulated PMERR is based on and trained and properly staffed PMERR section that:
  - Plans for IMPROVEMENT
  - Monitors for RESULTS
  - Evaluates for SUSTAINABILITY
  - Researches for DEVELOPMENT
  - Reports for TRANSPARENCY

## 4.3 Recommendations

The recommendations take into account feedback received from a variety of people met during the course of the evaluation, and in the culminating meetings with PHED. More specifically, the recommendations consider:

- Inputs, wish list and advice given by male and female participants of the FGDs;



- Candid feedback and suggestions on how to address problems narrated by the district officials of PHED, Health and local government;
- Suggestions presented by the best-performing operators;
- Commentary received and opinions on the key findings and way forward voiced by the participants of the executive review (27 June 2018) with the Secretary PHED, and finally;
- Discussion on the key recommendations in the meeting (23 July 2018) with the two senior managers in the meeting with the Chief Engineer.

Overall, careful attention is required to examine the need to redesign the planning function with PHED and allied departments. PHED needs to be seen to value a consultative approach and the promotion of the message that “What the people need is, and will remain so, the key driver” of PHED work. PHED must also demonstrate cost efficiencies and cost-benefits, and should therefore invest in closely monitoring implementation across the board. If this is influenced by political will or influential persons, then PHED should report the same with pros and cons so that lapses are duly attributed. Given below are the most important recommendations along with the proposed responsibility and broad timelines.

**Table 14: List of Key Recommendations and Associated Timelines**

| Sr. | Recommendation  | Timeframe    | Responsibility   |
|-----|---|--------------|--|
| 1   | The programme, as it was designed, was not intended to meet the needs of the entire population and must thus be continued and expanded in the future in order to ensure a reliable supply of clean drinking water for all in the province.  | Immediate    | Secretaries PHED, P&DD, and UNICEF                         |
| 2   | Use the evaluation TOC and improve it and expand it, to guide further programme implementation/future efforts. The improvements that can be made include i) expanding upon the strategies for sustainable success; ii) Listing risks and assumptions at every transition and iii) by identifying indicators at every level. Unpack the strategy level to cover all of the different approaches taken by the programme, complete with indicators and assumptions.          | Immediate    | Secretary PHED, Chief Engineer, Phase 2 Management, UNICEF |
| 3   | Conduct a census of all 409 plants, operational, out of order and non-functional and accordingly update the list of 409 plants. Similarly, physical water tests need to be included in the census. Suspect water quality should be sent to a reliable laboratory for complete testing. At each site measure key access and safety concerns of the plant users/beneficiaries and install support rails, etc. Retake water samples, retest and finetune operational plants. | Immediate    | PHED, UNICEF   |
| 4   | Stop or slow down current developments in Phase 2 and address programmatic, operational and monitoring issues.  | Immediate    | PHED (CDWA Phase 2 Management)                             |
| 5   | There is a need to include a community outreach, C4D and BCC component as well; this is discussed further in section 3.3.2 under “Missing Components in Design and Implementation”. Also refer to section 3.5 on C4D related to safe hygiene practices of the consumers (a similar recommendation was made by TPV in 2013).   | Sep-Oct 2018 | PHED, UNICEF, Other donors of the WASH sector              |

**Table 14: List of Key Recommendations and Associated Timelines**

| Sr. | Recommendation  | Timeframe    | Responsibility                              |
|-----|---|--------------|---|
| 6   | Hold an NGO conference and seek assistance on self-help basis. Motivate Department of Local Government to fund such NGOs for WFP support activities; get NGOs to provide civil society vigilance to improve monitoring of WFPs. Rethink the need for continual mass communications to support CDWA programming, secure installed WFPs, promote a culture of joint performance enhancements.   | Sep-Oct 2018 | PHED (XENs, Human Resources, Operations)    |
| 7   | To ensure that regular water quality testing is possible, PHED needs to invest in laboratories. At a minimum, labs should be available at the regional level and at the provincial centre in the PHED offices in Quetta. The laboratories should eventually comply with ISO 14001 and ISO 17025 standards. Ensure that the operational costs of the recommend laboratories are duly included in annual budgets.   | Sep-Oct 2018 | PHED (CDWA Phase 2 Management)              |
| 8   | Test the capability and commitment of operators and train/ retrain as much as required to ensure proper operations. Be sure to balance out the operator to WFP ratio and ensure full compliance by XENs and in the budget. Monitor this aspect strictly (a similar recommendation was made by TPV in 2013).   | Sep-Oct 2018 | PHED (XENs, Human Resource, Operations)     |
| 9   | Establish a properly staffed and trained PMERR Section, and ensure that all PHED is fully made aware of the section's mandate. TO START IMMEDIATELY: (a) Develop structured monitoring tools and guidelines (a similar recommendation was made by TPV in 2013), train staff accordingly and develop a holistic Monitoring Information System. (b) Conduct structured monitoring and ensure that monitors also carry out water quality testing at site using TDS/TSS texting kits. Suspect water quality should be sampled and sent for complete water quality testing. All sample collection protocols must be followed and thus monitors must be trained accordingly. (c) Subsequently, establish a built-in Early Warning and Reporting feature in the monitoring system. | Immediate    | PHED, P&DD, UNICEF                          |
| 10  | Hold internal evaluations at least once a quarter: (a) Hold spot monitoring using the <i>kacheri</i> approach and; (b) Explore the value-addition of community engagement, practices and procedures; (a similar recommendation was made by TPV in 2013). Where the GoB may not opt for using NGOs it can certainly use registered community-based organizations.  | Immediate    | PHED, P&DD, UNICEF                          |
| 11  | Legislative and Best Practice Framework must be understood by all within PHED particularly the PMERR. Like the SDGs, PHED must adhere to a set of national and provincial policies, laws, strategies and standards. This subscription entails that reporting be so aligned. Doing so enables and empowers PHED to function effectively under the law. (Please refer to Table 12: Legislative and Best Practice Framework Applicable to PHED.)   | Sep-Oct 2018 | Secretary PHED, Advisor, and Chief Engineer |

**Table 14: List of Key Recommendations and Associated Timelines**

| Sr. | Recommendation  | Timeframe    | Responsibility                                  |
|-----|---|--------------|---|
| 12  | Redesign the reporting and research component of PMERR: (a) Reporting and research require a policy – currently none exists; This aspect must be addressed at the level of the Secretary PHED. (b) There is no research wing within PHED; no one is exploring alternate/eco-friendly technology for clean water (Warka towers, etc.) sourcing. (c) Alternate energy options should be properly explored. Instead of following the general trends in Pakistan, explore options best suited for Balochistan and customize according to regions.   | Nov-Dec 2018 | PHED, P&DD, DoH, DoN                            |
| 13  | The quality of documentation must be improved. Immediate steps are required in this regard. Laboratory test results should be transcribed into Excel and analysed for trend identification over the period 2010–2015 – the point where regular water quality monitoring stopped.  | Sep-Nov 2018 | PHED (Monitoring, CDWA Phase 2 Management)      |
| 14  | Reporting is weak and requires a new and invigorating boost. Rethink the need for monitoring; formulate a policy and the articulate the elements of monitoring and related data collection. (a) Ensure regular data collection; simplify the data collection to most-needed inputs, and establishing a real-time, cloud-based upload and central database facility. (b) TRAIN, Train and retrain monitoring staff. (c) Enable NGOs and people to upload pictures to the cloud-based central database; or to send that through mobile phones to a common number. (d) Put up a dashboard on the data and give open access to all, without any compromises or censorship. Remember, a reliable monitoring system is only as good as the data collected and the interest of the users of such information. Remember, all data collected on time and accurately enables PHED to report along the SDG framework (Please refer to Table 11: SDG targets relevant to PHED.) | Sep-Nov 2018 | Secretary PHED, Advisor, Chief Engineer, UNICEF |
| 15  | Key policy- and decision-makers, including development partners, should be encouraged to convene on provincial water issues and to assess PHED progress in this regard. Financing shortfalls and the need for necessary institutional reforms should then also be part of the agenda.   | Immediate    | P&DD, PHED, UNICEF                              |
| 16  | Redesign annual budgets to include all missing elements of management design; mainly (a) develop the enhancement / expansion plan for ward-level installations; (b) Solicit Asian Development Bank/ World Bank/ European Commission grants for increasing WFPs in the most densely populated districts; Opt for donors such as Swiss Development Corporation that give grants for soft components such as capacity development, C4D/BCC and community engagement.   | Nov-Dec 2018 | PHED, P&DD                                      |

## **TOR EVALUATION OF THE CLEAN DRINKING FOR ALL (CDWA) PROJECT IN BALOCHISTAN**

### **Introduction**

These Terms of Reference (ToR) document is meant to serve as a blueprint for the Evaluators. It outlines the key elements of the purpose, scope, process and products of an evaluation, including management and technical aspects as necessary. It is based on the "UNICEF Adapted UNEG Quality Checklist for Evaluation Terms of Reference, 2017" and the Evaluators are encouraged to consult this and other applicable Government, UNICEF and UNEG standards while responding to the ToR and during the evaluation process.

### **Background to the Evaluation**

UNICEF has been working with Planning and Development Division (P&DD) Balochistan since 2015 on M&E capacity development under its National Evaluation Capacity Development (NECD) initiative. In 2015, the Government of Balochistan (GoB) asked UNICEF to support the province on developing an evaluation policy, and other enabling support interventions for high-quality evaluations.

Under the GoB capacity development initiative of UNICEF, the work entails a set of preparatory steps that include building capacity of the P&DD on high-quality; equity-focused and gender-responsive evaluations. A workshop was organized in December 2015 for all the concerned officers of P&DD, Bureau of Statistics and other concerned departments involved in M&E for the same purpose. As a result of the recommendations of the workshop and later reaffirmed by the Secretary of P&DD and head of SDG Unit, P&DD for a training for government officials in order to give them practical experience of how to undertake high-quality evaluations. Thus, a joint evaluation was suggested where the P&DD selected a project from the social sector (ADP) for such an evaluation. UNICEF agreed to provide technical support for the evaluation and agreed to support a joint-country led evaluation for an ADP project within the WASH sector through capacity-building work.

In one of the capacity-building workshops the P&DD and PHED determined that the Clean Drinking Water for All (CDWA) Project is an important undertaking of the GoB in terms of geographic spread, influence on the lives of the citizens. Therefore Secretary P&DD selected the CDWA project, Phase-1 should be evaluated.

### **Evaluation Object**

Phase-1 covering the period 2008-2010 and 2011-2015 Phase-2 planning period of the CDWA project is the primary object of the evaluation. Reportedly the current spread of 409 Water Filtration Plants (WFPs) in 15 districts of Balochistan. The reported current status of these plants stands at 77% function and 23% non-functional plants. The results framework and descriptions of the intervention's intended results are provided. However a coherent Theory of Change is not available and therefore the Evaluators are expected to prepare one for the evaluation retrospectively. The PC-I document and several background documents will be made available for this purpose.

### **CDWA Context**

The Clean Drinking Water Initiative (CDWI) was the predecessor of CDWA project and was initiated in 2007. At that time PHED was not involved and the main stakeholders / implementers were EPA, District Government and the contractor. During the course of this scheme, a total of 60 plants were installed in various districts of Balochistan.

In 2007, the GoP decided to install 567 water purification plants in Balochistan funded from the federal budget. Each Union Council (UC) would have one or more installed depending on the size of the UC. Ideally, once complete, this project would provide free, potable water for 2.85 million people (approximate) in Balochistan. For this purpose, the District Government provided the land free of cost while the project itself was carried out through the Provincial Project Implementation Unit (PPIU). The Project Monitoring Cell working under the administrative control of Secretary, PHED was responsible for monitoring. Although, the Federal Government remained responsible for all decision-making, which includes bidding documents, pre-qualification, selection of contractor and awarding of work. The bid award committee chaired by the Secretary Ministry of Industries, Production and Special Initiative conducted the bidding process. The bids were scrutinized and verified by the M/S NESPAK and the third-party validation (TPV) team whereby the process was found to be sound.

The project officially began in 2008 with a target of 575 (567 + 8 additional plants) total plants under the CDWA scheme. Of these plants, 542 would be Ultra-Filtration (UF) plants while 33 would be Reverse Osmosis (RO) plants. The respective district governments would determine the sites / locations used in each UC. The chosen contractors (through reverse bidding) for UF plants was M/S GP-BIDC Islamabad, while the lowest bidder for RO plants was Ever Green Lahore. Although, by the end of Phase-1 of the CDWA scheme in 2011, only 409 UF plants and 13 RO plants were installed while 45 of those UF plants remained non-functional. The financial breakdown is as follows:

- Contract Cost of 409 UF Plants Rs.812.187 Million;
- Contract Cost of 33 RO Plants Rs.246.236 Million;
- Contract of 133 plants awaited Rs.332.50 Million; type of plant is not mentioned

There were four classifications of plants used during the course of this project under the two main categories mentioned above i.e.

- For Bacteria and Nitrate (represented by X)
- For Bacteria and Fluoride (X2)
- For Bacteria and Hard Water (X3)
- For Reverse Osmosis (X4).

By the end of the first phase of CDWA, it was clear that many changes needed to be made to implementation strategy and project design. Lack of electricity was the primary reason why many plants, although successfully installed, failed to provide the clean drinking water as was intended. More so because these plants need to be run all day in order to avoid backwash. High O&M costs plagued the plants at almost every UC, which restricted functionality and therefore reduced performance. Water contamination and inaccurate or non-existent testing for the same during M&E meant that problems were not identified as soon as they occurred and hence were not rectified in

time. Similarly, turbidity (silt accumulation) choked filters hence raising O&M costs. Not to mention that often, Nazims selected plant locations without properly determining a viable water source. Furthermore, the scattered population of Balochistan posed a challenge to service providers both in terms of supplying clean drinking water but also in the deployment of personnel. According to PHED, this problem was exacerbated by the lack of budget for vehicles and accommodation, which meant that CDOs could not be deployed.

Besides the many logistical problems, P&DD was faced with a constant hurdle in the implementation of social mobilization and awareness efforts. Many endeavours were refused because these would add to the cost. Similarly, many CDWs are still working with PHED but are not being used in community mobilization activities which is a drain of resources anyways according to the current Project Director of the CDWA project Phase-2. On the other hand, religious sentiments, especially in the rural areas were against the project claiming suspicions that said water causes infertility.

In addition, the biggest hurdle for CDWA came in the form of devolution of power in 2010. The GoP handed over the reins to CDWA and then stopped funding for the project. In other words, the provincial government became entirely responsible for the project both financially as well as in implementation, monitoring and control. According to Section Chief Foreign Funding, the absence of the GoP meant that the process of getting approvals and permits became less stringent thereby allowing underperforming contractors to win bids.

In 2015, the design phase for Phase-2 of CDWA began after which in 2017 implementation began. This includes 85 solarized plants, 24 RO plants and 61 UF plants. After consideration of all the issues that were faced in Phase-1, it was decided to move towards renewable energy in the form of solar panels. Despite the high upfront costs, (PKR 1.0 mil for UF plants and PKR 1.7 million for RO plants) it is a feasible option considering these solar systems will last at least 25 years and will reduce O&M costs by more than half. Furthermore, structures were made using prefabricated materials during Phase-1 but in Phase-2, civil work was done using bricks and cement with wider roofs in order to support the installation of solar panels. According to current available documentation the geographic spread of the WFP is depicted in the following table.

*Table Summary of WFPs by status and districts*

| District   | Functional plants | Non-functional plants | Total |
|------------|-------------------|-----------------------|-------|
| Barkhan    | 3                 | 2                     | 5     |
| Dera Bugti | 3                 | 1                     | 4     |
| Gawadar    | 8                 | 1                     | 9     |
| Harnai     | 5                 | 1                     | 6     |
| Jaffarabad | 42                | 3                     | 45    |
| Jhal Magsi | 9                 | -                     | 9     |
| Kachhi     | 8                 | 11                    | 19    |
| Kalat      | 9                 | 3                     | 12    |

|                 |     |    |     |
|-----------------|-----|----|-----|
| Kech            | 8   | 5  | 13  |
| Khuzdar         | 14  | 19 | 33  |
| Killa Abdullah  | 21  | 1  | 22  |
| Killa Saifullah | 9   | 4  | 13  |
| Kohlu           | 2   | 1  | 3   |
| Lasbela         | 8   | 5  | 13  |
| Loralai         | 15  | 5  | 20  |
| Mastung         | 13  | 1  | 14  |
| Nasirabad       | 17  | 4  | 21  |
| Nushki          | 5   | 3  | 8   |
| Pishin          | 25  | 3  | 28  |
| Quetta          | 53  | 14 | 67  |
| Sherani         | 4   | 2  | 6   |
| Sibi            | 8   | 2  | 10  |
| Zhob            | 17  | 2  | 19  |
| Ziarat          | 8   | 2  | 10  |
| Total           | 314 | 95 | 409 |

## Evaluation Purpose and Objectives

The overall purpose of conducting an independent and objective evaluation is to gauge the effectiveness of the intervention by Government of Balochistan's programme related to filtration plants, Clean Drinking Water for All (CDWA) implemented by Public Health Engineering Department (PHED) and/or to inform programming decisions for improved water supply to the households by while demonstrating accountability to the stakeholders, drawing lessons learnt, and forming recommendations to inform continuity and scale-up.

Since almost all government programmes are designed to improve the lives of its citizens, the programme to be evaluated will be measured in whether or not it was successful in addressing problems related to water and whether or not there are more effective ways of addressing the same problem for a different cost. The evaluation is also aimed to build capacity of the Government of Balochistan in conducting evaluations. In this regard the evaluation will support and inform the GoB (through P&DD and PHED) in developing/improving a GoB Evaluation Policy for development projects.

The Evaluators are also expected to check and review the reasons for non-functionality of WFPs, in particular, but not limited to, the following as key reasons:

- Water Source/Shortage of Water
- Irregular supply of POL for generator



- Plant motor out of order, and or pressure pump out of order
- Security and social concerns

For Impact, the evaluation will only look at the long-term outcomes and will not employ any impact evaluation methodology using experimental methods.

## Evaluation Scope

The evaluation must explicitly respond to thematically the access to Clean Drink Water for All, the SDGs related to WASH, and should geographically cover an appropriate sample of districts (recommended at least 15) where the WFPs have been installed. The evaluation must be launched and completed in the period April to June 2018. This scope of the evaluation is deemed adequate to meet the stated evaluation objective(s), given the available resources and time considerations. As part of the evaluation, officers of M&E Section, P&DD and PHED will be trained on conducting high-quality evaluations.

## Users of the Evaluation and Associated Dissemination

Both P&DD and PHED will use the evaluation to inform the planning and implementation of CDWA Phase-2. P&DD may use the products of the evaluation to inform future development planning and donor interactions. Overall the Evaluation will demonstrate and strengthen GoB's commitment to demonstrate results, transparency and accountability through an independent and credible evaluation system catering to the SDG era.

For UNICEF the evaluation is expected to yield analysis that informs the nature and magnitude of continued support to GoB on PME and WASH related interventions. Donors, United Nations agencies and INGOs/NGOs may use the evaluation findings and recommendations to inform future development interventions in Balochistan.

## Evaluation Criteria

The evaluation must consider and follow the OECD/DAC criteria<sup>16</sup> covering relevance, efficiency, effectiveness, outcome/impact and sustainability. Additionally the evaluation is also expected to consider the human rights-based approach (HRBA), equity, and gender equality applicable to the CDWA project.

Finally, the evaluation should take into account the deployment of a results-based management approach deployed by PHED, or lack thereof. Attention should also be given to disaster mitigation and recovery since Balochistan is particularly prone to natural disasters such as earthquakes, floods and drought.

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<sup>16</sup> The Network on Development Evaluation is a subsidiary body of the Development Assistance Committee (DAC) at the OECD. A key component of the Network's mission is to develop internationally agreed norms and standards to strengthen evaluation policy and practice. Shared standards contribute to harmonised approaches in line with the commitments of the Paris Declaration on Aid Effectiveness. Its purpose is to increase the effectiveness of international development programmes by supporting robust, informed and independent evaluation. The Network is a unique body, bringing together 31 bilateral donors and multilateral development agencies. Readers are encouraged to refer to the complete texts available on the DAC Network on Development Evaluation's website: [www.oecd.org/dac/evaluationnetwork](http://www.oecd.org/dac/evaluationnetwork)

## Evaluation Framework and Key Questions

The undertaking must examine and answer the following key questions. This is not an exhaustive list of questions and therefore the Evaluators may include additional questions as deemed appropriate in light of the preparatory research at the Inception stage:

- How relevant were the CDWA interventions to the needs and concerns of local people across various socioeconomic groups (including men, women and children from the mainstream culture and from minority communities) in the project target districts?
- How effective was the CDWA project in providing access to clean drinking water to target communities and addressing other objectives the project might have?
- Was the design of the WFPs appropriate to the context (ecology, water table, physical and chemical composition of groundwater)? Was the selection of the WFP site effectively done?
- How successful was the project in managing resources (human, material and financial resources) and ensuring that the most timely, cost-effective delivery?
- What are the long-term outcomes of the CDWA interventions aimed at providing clean drinking water?
- To what degree are the benefits of the CDWA interventions, in terms of both outcomes and impacts, expected to persist after the intervention period? What are the most important factors responsible for the achievement or failure of the intervention's overall sustainability?
- How responsive has the Project been in addressing HRBA, equity and gender aspects in the design and implementation?

Evaluators are expected to build an Evaluation Matrix from the above questions that should include foreseeable indicators (either based on the results framework or from best practices as applicable), tools (KIIs, FGDs, HHS, etc.) and sources of information. The Evaluation Matrix must include the OECD-DAC – relevance, effectiveness, efficiency, impact and sustainability, and UNEG<sup>17</sup> criteria on HRBA, equity and gender aspects. A sample framework is given below.

*Sample structure for CDWA Project Evaluation Matrix*

| Evaluation aspect       | EQ# | Evaluation Question (EQ) | Indicator(s) | Eval. Tool | Secondary Data (SD) sources |
|-------------------------|-----|--------------------------|--------------|------------|-----------------------------|
| Relevance               |     |                          |              |            |                             |
| Effectiveness           |     |                          |              |            |                             |
| Efficiency              |     |                          |              |            |                             |
| Outcomes / Impacts      |     |                          |              |            |                             |
| Sustainability          |     |                          |              |            |                             |
| HRBA, Gender and Equity |     |                          |              |            |                             |

<sup>17</sup> In 2016, UNEG adopted the updated 2016 UNEG Norms and Standards. The ten general norms should be upheld in the conduct of any evaluation; the four institutional norms should be reflected in the management and governance of evaluation functions. The associated standards support the implementation of these normative principles.

## Methodology

It is envisioned that a summative-formative methodology deploying qualitative and quantitative mixed methods will be deployed. For the qualitative component 45 (maximum) Key Informant Interviews (KIIs) should be used for semi-structured interviews with key stakeholders; at the government level with the P&D, PHE, Finance, and Health Departments at the provincial level, and where applicable at the district levels as well. Other stakeholders include Asian Development Bank (ADB), World Health Organization (WHO), UNICEF (PME, WASH), local NGOs working on water and health. This list is not an exhaustive list of stakeholders and therefore the Evaluators may identify other stakeholders as seen fit and based on the preparatory research at the Inception stage. Similarly a series of 20 anticipated Focus Group Discussions (FGDs) are foreseen at the district level with men and women of the communities. The selection of communities should be purposively sampled.

Quantitatively, a household survey (HHS) of the portion of the population using the WFPs is foreseen at the district level. The selection of households for this purpose should be properly sampled as per best practices for evaluation purposes should be undertaken. Informal interviews may be conducted with plant staff as and when deemed appropriate by the Evaluators.

Observation/verification checklists will be used to assess the filtration plants for functionality, cleanliness, equity accessibility, operation time, staffing, location etc. will be developed and used for the sampled WFPs. Additionally water samples from 15-20 WFPs will be drawn and tested for basic drinking water quality tests. The tests may be conducted through PCRWR in Quetta.

It is mandatory that the quantitative tools for the HHS and plant observations are pretested, improved before deploying the same for the actual survey. Overall, the evaluation report will follow the quality standards and UNICEF adapted guidelines for UNICEF evaluation reports available at:

[https://www.unicef.org/evaldatabase/files/UNICEF\\_adapated\\_reporting\\_standards\\_updated\\_June\\_2017\\_FINAL\(1\).pdf](https://www.unicef.org/evaldatabase/files/UNICEF_adapated_reporting_standards_updated_June_2017_FINAL(1).pdf)

### Sampling

**Universe:** The universe of this evaluation survey is confined to urban and rural areas of 31 districts of Balochistan province. The water filtration plants under Clean Drinking Water for All (CDWA) project installed at union council level and households of beneficiaries of these drinking water filter plants are the target population. The militarily restricted/dangerous areas are out of scope of the survey. For pragmatic purposes the sampled districts must not exceed 15. The potential, updated and relevant sampling frame is essential to select a robust and statistically representative sample from the universe stratified on geography, operational plant status. A detailed list of WFPs is attached with this ToR as Annex-1 for sampling purposes. Any additional information for sampling or planning purposes should be obtained from the PHED. UNICEF provincial office will assist in collecting such information.

The foreseen mixed methods of KIIs, FGDs and HHS, narrated above are not exhaustive and the Evaluators may include other methods as seen fit for evaluation purposes. The Evaluators are expected to develop data collection tools that meet applicable national and international best practices, including UNEG/UNICEF guidelines on participatory approaches both in the data collection

stages and in the formulation of recommendations. The latter ensures ownership of the actions to be taken in the post-evaluation period.

All secondary data/documents collected and referenced for the purpose of the evaluation will be properly listed using the Harvard bibliography style and included as an appendix to the inception and evaluation reports.

*The expected evaluation products include the following:*

| Product (deliverable)   | Tentative date of delivery | Payment schedule |
|---|----------------------------|------------------|
| Draft Evaluation Inception Report complying to UNICEF HQ (NY) guidelines to be shared with the government on email for review and feedback; | 25th April                 |                  |
| Inception Report Presentation Workshop in Quetta with relevant P&DD and PHED staff (if required by the government);                         | 26nd April                 |                  |
| Hiring of field teams   | 27th -28th April           |                  |
| Training of field teams   | 29th-April - 1st May       |                  |
| Pre-testing   | 2nd May                    |                  |
| Fieldwork   | 3rd May- 18th May          |                  |
| Draft Evaluation Report complying with UNICEF Adapted guidelines  | 11th Jun                   |                  |
| Validation Workshop on findings and recommendations.  | 14th Jun                   |                  |
| Final Evaluation Report complying with UNICEF Adapted guidelines (link shared above).   | 29th Jun                   |                  |

### **Ethics - Gender and Human Rights, including child rights**

As mentioned earlier in the previous sections, human rights, equity and gender aspects must be covered in the design of the evaluation. It is also obligatory upon the Evaluators that UNICEF guidelines on participatory approaches and respondent-friendly methods are used during data collection, particularly where the underprivileged, marginalized, physically challenged portion of the population is concerned. In cases where the fieldwork involves women and children are concerned, their rights must be catered to.

Similarly while preparing charts, tabulations and appendices for the draft and final reports the Evaluators must be cognisant of confidentiality of information rights of the respondents of the HHS and FGDs. No personal information can be shared. Please seek further guidance from PME section of UNICEF Quetta Office if unclear on this critical element of reporting.

Alternately the Evaluators may choose to seek further guidance from the UNEG Guidance on Integrating Human Rights and Gender Equality in Evaluation available at <http://www.uneval.org/document/detail/980>, and the UN-SWAP Evaluation Performance Indicator accessible at <http://www.uneval.org/document/download/2433>.

## Challenges and Risks

The Evaluators are expected to identify potential/foreseeable evaluation risks and limitations and the proposed mitigation measures to be adopted. These risks/challenges should be clearly identified in the Inception Report. The following structure can be used for this purpose.

### *Evaluation Limitations and Mitigation Measures*

| Category                               | Challenges / Limitations | Management and Mitigation Measures |
|--|--------------------------|------------------------------------|
| Geography related                      |                          |                                    |
| Security related                       |                          |                                    |
| Participation or cooperation related   |                          |                                    |
| Secondary data / documentation related |                          |                                    |
| Fieldwork timing related               |                          |                                    |
| Any Other                              |                          |                                    |

## Evaluation Workplan

It is expected that the evaluation will be undertaken in the months of April-June 2018. The Evaluators are expected to draw up a workplan for the Inception stage, for the qualitative and quantitative fieldwork leading to the final stage of analysis and reporting. It is expected that reviews and feedback from the key stakeholders should be incorporated into the workplan. Tentatively the fieldwork is expected to be completed in the period 7th May to 10th Jun. The Evaluators should take into account the challenges of fieldwork during the month of Ramadan and the associated Eid holidays.

## Management Arrangements

All stakeholders and evaluation managers will have equal responsibility to ensure a high-quality, impartial and independent evaluation. Some key roles and responsibilities are highlighted below:

### **P&DD and UNICEF shared responsibilities (evaluation managers)**

The evaluation managers are responsible for timely review and consolidated feedback on submitted evaluation products (inception report, draft evaluation report; and final report). They will also facilitate the Evaluators:

- In the finalization of the 45 KII respondents and in sending out corresponding request of meetings, and;
- In the timely identification of participants for the Validation Workshop; including full support in sending invitations to these participants and in obtaining confirmations.

For an overall quality assurance process, it is the responsibility of evaluation managers to establish an **Evaluation Reference Group (ERG)** and to identify the ERG members from key officials of all relevant departments and UNICEF under adequate Terms of Reference for review of evaluation products and milestones. The quality assurance process will ensure participation of the Reference Group and incorporation of feedback, as required.

### **Evaluator's responsibilities**

The Evaluators are required to also include quality assurance approaches and application of methods for both qualitative and quantitative data collection. In this regard:

- Quantitative data collection must deploy 5% random bag-testing of collected forms;
- Data entry must be validated as well before data analysis;
- Similarly, the Inception Report must include an overview of the analytical methodology that addresses the qualitative and quantitative parts and the triangulation between the two forms of data, and;
- All final reports must be professionally developed and edited.

A management plan will be provided in the inception report to ensure timely execution of the evaluation given the challenges posed by the geographic scope etc.

### **Evaluation Team**

P&DD will appoint a focal person for coordination, facilitation to coordinate and facilitate the UNICEF-appointed focal person and the Evaluation Team Lead. Similarly, UNICEF will also appoint either the head of research and evaluation department to coordinate with and support the Evaluation Team Lead.

The proposed team of Evaluators must have a demonstrated record of conducting evaluations in Pakistan. The Team Lead must have subject knowledge and experience of at least 15 years, with at least a Master's degree. Other team members must either have experience of 5-7 years of conducting evaluations in Pakistan or the desired subject qualifications for the sub-components of the evaluation. The Evaluation Team must take direction from the Team Lead on all matters related to design, workplan, fieldwork, data management, analysis and reporting. The Team Lead is responsible for all executions, quality of work, coordination with the Proponents and assigned representatives. Team members should include survey experts, analytical experts, community mobilization dully supported by logistics and survey support experiences.

As part of the capacity-building component, a select group of P&DD and PHED staff will be engaged as observers in the pilot testing process and a few KIIs and FGDs. The Evaluators will select such staff members after reviewing their qualifications. The associated travel costs, TA/DA etc. for these staff members will be borne directly by P&DD and PHED. Fieldwork data collection teams hired by the Evaluators must be reasonably experienced in data collection in Balochistan.

The Evaluators will try to ensure gender parity with a male-female mixed team, who will be thoroughly trained on the HHS and plant observation/assessment checklist. It is expected that the training will be a 3-5 day event. A team of four supervisors (two women and two men) will be hired

to ensure supervision and monitoring. The supervisors will mark and assign sampled households to each interviewer for administering the questionnaires.

## Selection Criteria<sup>18</sup>

*Selection criteria to be used for selection of consultants is given below:*

| Criteria   | Rating |
|--|--------|
| Specific experience of the consulting firm/ institute/organization relevant to the assignment and Pakistan experience.   | 20     |
| Adequacy of the proposed methodology and workplan in responding to the Terms of Reference  | 20     |
| Plan for meaningful involvement of evaluation team members and organizations from Pakistan in the proposed work.   | 20     |
| Organizational capabilities to implement and manage evaluation related to improving access to clean water judged from previous experience in holding and managing evaluations and delivering them in a timely way. | 25     |
| Sector experience of the evaluation team and experience of working with researchers and evaluators in Pakistan   | 10     |
| Quality of technical reflections based on understanding of the ToR   | 5      |

The financial proposal shall be awarded a maximum of 30 points and shall not be part of the technical evaluation criteria

## Budget for Evaluation<sup>19</sup>

Budget for evaluation is not specified here. Applicants are expected to propose a budget that is commensurate with the proposed methodology and scope of work.

## Supervision

The evaluation will be jointly supervised by the P&DD and PHED on behalf of the Government of Balochistan and UNICEF. The following four-member team will supervise the evaluation:

- Mr Muhammed Ali Kakar, Secretary Planning and Development, Implementation
- Mr Javaid Ahmed, Executive Engineer, PHED
- Ms Mussarrat Youssuf, Evaluation Specialist, UNICEF Country Office
- Mr Omar Salim Durrani, PME Officer, UNICEF Field Office Quetta

For ongoing quality assurance regarding technical matters, responsibility will rest with Ms Mussarrat Youssuf. PMER Balochistan will look after the coordination of all activities related to the assignment.

<sup>18</sup> Since the evaluation team has already been hired by UNICEF, these criteria were already applied in its hiring.

<sup>19</sup> UNICEF Pakistan has included the evaluation in the overall work on Balochistan Evaluation Policy and M&E framework. Thus, no separate budget is required for this evaluation.



WASH BFO and PCO will be involved through provision of technical support and lead the coordination with PHED in close coordination with BFO PMER.

## EVALUATION TOR ANNEX-1: LIST OF 409 CDWA WATER FILTRATION PLANTS

| S# | District | Name of Plant / Union Council | Location                                   | Plant Type 1 | Plant Type 2 | Plant Type 3 | Cap. (GPH) | Status |
|----|----------|-------------------------------|--|--------------|--------------|--------------|------------|--------|
| 1  | Quetta   | Malik Akhtar Muhammad         | Quarry Road                                | X3           | -            | -            | 1000       | fu     |
| 2  | Quetta   | M.A. Jinnah                   | Nursing Hostel Civil Hospital Inscomb Road | X3           | -            | -            | 500        | fu     |
| 3  | Quetta   | Liaqat Bazaar                 | Malibagh Office WASA                       | X3           | -            | -            | 1000       | fu     |
| 4  | Quetta   | Baldia Dispensary             | Veternary Hospital Mechonogy Road          | X3           | -            | -            | 1000       | fu     |
| 5  | Quetta   | Patel Road                    | Patel Road Tube Well                       | X3           | -            | -            | 1000       | fu     |
| 6  | Quetta   | Faqir Muhammad                | Gawalmaande Office                         | X2           | X3           | -            | 1000       | nf     |
| 7  | Quetta   | Sardar Essa Khan              | Tail Godown T/W                            | X            | -            | -            | 1000       | fu     |
| 8  | Quetta   | Muhammad Ali shaheed          | Yazdan Kahn School                         | X2           | -            | -            | 1000       | fu     |
| 9  | Quetta   | Ghalzai                       | Hashim Khan Ghilzai Trust Nichari          | X            | -            | -            | 1000       | fu     |
| 10 | Quetta   | Alamdard                      | Toghi Road Quaidabad School                | X            | -            | -            | 1000       | fu     |
| 11 | Quetta   | Saidabad                      | Khartar T/W                                | X2           | -            | -            | 1000       | nf     |
| 12 | Quetta   | Marriabad                     | Sardar Nisar Tube Well                     | X            | -            | -            | 1000       | fu     |
| 13 | Quetta   | Nasirabad                     | Dispensary T/W                             | X            | -            | -            | 1000       | fu     |
| 14 | Quetta   | Killa Kansi                   | Kasi Killa                                 | X            | -            | -            | 1000       | fu     |
| 15 | Quetta   | Balochi Street                | Civil Defence Office Dial Bagh             | X            | -            | -            | 1000       | fu     |
| 16 | Quetta   | Samander Khan                 | Kasi Graveyard Old T/W                     | X            | -            | -            | 1000       | fu     |
| 17 | Quetta   | Shaldra                       | Durrani Bagh New                           | X            | -            | -            | 1000       | nf     |
| 18 | Quetta   | Zulfaqar Ali Shaheed Roe      | Saeedabad                                  | X2           | -            | -            | 1000       | fu     |
| 19 | Quetta   | Baraich                       | Allah Dina Road T/W                        | X            | -            | -            | 1000       | nf     |
| 20 | Quetta   | Haji Ghabi                    | Haji Ghabi Road T/W New                    | X            | -            | -            | 1000       | fu     |
| 21 | Quetta   | Haji Kudus                    | Nasrullah Chowk                            | X            | -            | -            | 1000       | fu     |
| 22 | Quetta   | Afghan                        | Tareen Road T/W                            | X            | -            | -            | 1000       | fu     |
| 23 | Quetta   | Chaman Phatak                 | T&T Colony                                 | X2           | -            | -            | 1000       | fu     |
| 24 | Quetta   | Imdad                         | Barginza Villa                             | X2           | -            | -            | 1000       | fu     |
| 25 | Quetta   | Tareen                        | Taroo Chowk                                | X            | -            | -            | 1000       | fu     |
| 26 | Quetta   | Shahara-e-Iqbal               | Govt Boys School Prince Road               | X            | -            | -            | 1000       | fu     |
| 27 | Quetta   | Sirki                         | Mulana Noor Mohammad                       | X            | -            | -            | 1000       | fu     |
| 28 | Quetta   | Gool Masjid                   | Mitha Chowk Usmanabad                      | X            | -            | -            | 1000       | fu     |
| 29 | Quetta   | Mula Salam Road               | QDA T/W                                    | X2           | -            | -            | 1000       | nf     |
| 30 | Quetta   | Labour Colony                 | Jamal Abdul Baqi                           | X            | -            | -            | 1000       | fu     |
| 31 | Quetta   | Industrial                    | Sirki Kalan/Jatoi colony                   | X            | -            | -            | 1000       | fu     |
| 32 | Quetta   | Saragargai                    | WSS Malaizai Nasiran                       | X            | -            | -            | 1000       | fu     |
| 33 | Quetta   | Nawa Killi                    | WSS Killi Nasiran                          | X            | -            | -            | 1000       | fu     |
| 34 | Quetta   | Hanna                         | Killi Babri Hanna                          | X            | -            | -            | 500        | fu     |
| 35 | Quetta   | Kotwal                        | WSS Killi Umer Road Wasa Office            | X            | -            | -            | 1000       | nf     |

| S# | District | Name of Plant / Union Council | Location                                | Plant Type 1 | Plant Type 2 | Plant Type 3 | Cap. (GPH) | Status |
|----|----------|-------------------------------|---|--------------|--------------|--------------|------------|--------|
| 36 | Quetta   | Kaker                         | Ismail Colony, Rehmat Colony Sirki Road | X            | -            | -            | 1000       | nf     |
| 37 | Quetta   | Jaffer Khan Jamali            | Eidgah Jail Road Huddah                 | X2           | -            | -            | 1000       | fu     |
| 38 | Quetta   | Forest Nursery                | Smungli Housing Scheme WASA Tubewell    | X2           | -            | -            | 1000       | fu     |
| 39 | Quetta   | Hudda                         | Mano Jan Road                           | X2           | -            | -            | 1000       | fu     |
| 40 | Quetta   | Manoo Jan                     | Railway Colony Joint Road               | X            | -            | -            | 1000       | fu     |
| 41 | Quetta   | Almoo                         | Killi Alam Khan                         | X2           | -            | -            | 1000       | fu     |
| 42 | Quetta   | Killi Shahbo                  | Shahbo                                  | X2           | -            | -            | 1000       | nf     |
| 43 | Quetta   | Killi Ismail                  | Killi Ismail                            | X2           | -            | -            | 1000       | fu     |
| 44 | Quetta   | Killi Rajab                   | Killi Tarkha New Tube Well              | X            | -            | -            | 1000       | fu     |
| 45 | Quetta   | Arbab Karam Khan              | Shahzman Street                         | X            | -            | -            | 1000       | nf     |
| 46 | Quetta   | Raisani Road                  | Qurban Ali Bagh Reisani Road            | X            | -            | -            | 1000       | fu     |
| 47 | Quetta   | Deba                          | Killi Shah Muhammad                     | X            | -            | -            | 1000       | fu     |
| 48 | Quetta   | Tirkha                        | Central School                          | X3           | -            | -            | 1000       | fu     |
| 49 | Quetta   | Wandat Colony                 | Stop No.1 at B&R Tube Well              | X2           | -            | -            | 1000       | fu     |
| 50 | Quetta   | Sheikh Manda                  | WSS Chowkal Muhammad Murad              | X            | -            | -            | 1000       | fu     |
| 51 | Quetta   | Sabzal Road                   | Kharoot abad PHED tube well             | X            | -            | -            | 1000       | nf     |
| 52 | Quetta   | Pashtoon Bagh                 | Haji Allah Gul Masjid                   | X            | -            | -            | 1000       | fu     |
| 53 | Quetta   | Poodgalli Chowck              | Killi Ibrahim / Bangulzai               | X            | -            | -            | 1000       | fu     |
| 54 | Quetta   | Chashma Jeo                   | WSS Chashma Jeo Jadeed-2                | X            | -            | -            | 1000       | fu     |
| 55 | Quetta   | Ahmed Khan Zai                | Killi Naik Mohammad                     | X            | -            | -            | 1000       | nf     |
| 56 | Quetta   | Qambarani                     | Bangal Zai                              | X            | -            | -            | 1000       | fu     |
| 57 | Quetta   | Lore Karaz                    | Gafoor Town                             | X            | -            | -            | 1000       | nf     |
| 58 | Quetta   | Satellite Town                | Block No. near Public Park              | X            | -            | -            | 1000       | nf     |
| 59 | Quetta   | Zarkhoo                       | WSS Zarkhoo                             | X            | -            | -            | 500        | fu     |
| 60 | Quetta   | KAC Baig                      | WSS Kachi Baig                          | X            | -            | -            | 500        | fu     |
| 61 | Quetta   | Shadinzai                     | WSS Hazara Town Block-1                 | X2           | -            | -            | 500        | nf     |
| 62 | Quetta   | Railway Coloney               | Railway Housing Society                 | X            | -            | -            | 1000       | fu     |
| 63 | Quetta   | Kuchlak                       | Saznar Khali Kuchlak                    | X            | -            | -            | 500        | fu     |
| 64 | Quetta   | Panjpai                       | WSS Panjpai Town                        | X            | -            | -            | 500        | fu     |
| 65 | Quetta   | Cantt                         | Police Lines                            | X            | -            | -            | 1000       | fu     |
| 66 | Quetta   | Alizai                        | Balochistan University                  | X            | -            | -            | 500        | fu     |
| 67 | Quetta   | Almoo                         | IT University Takatu Campus             | X            | -            | -            | 500        | fu     |
| 68 | Pishin   | Pishin Bazar City 1           | Near WSS, Christian Colony Tank         | X            | -            | -            | 1000       | fu     |
| 69 | Pishin   | Pishin City II                | Machan High School T/W                  | X            | -            | -            | 1000       | fu     |
| 70 | Pishin   | Bazar Kohna                   | Tartah                                  | X            | -            | -            | 500        | fu     |
| 71 | Pishin   | Batazai                       | Near Source Community Killi             | X            | -            | -            | 500        | fu     |
| 72 | Pishin   | Manzaki                       | Manzaki Bazar                           | X2           | -            | -            | 500        | fu     |
| 73 | Pishin   | Karbala                       | WSS Karbala Tube Well                   | X2           | -            | -            | 500        | fu     |
| 74 | Pishin   | Malezai                       | Near Malezai Addah                      | X            | -            | -            | 500        | fu     |
| 75 | Pishin   | Saranan                       | Near Source of WSS Khudaidadzai         | X            | -            | -            | 1000       | fu     |
| 76 | Pishin   | Ajram Shahdzai                | Kata Bagh                               | X            | -            | -            | 500        | fu     |

| S#  | District       | Name of Plant / Union Council | Location                               | Plant Type 1 | Plant Type 2 | Plant Type 3 | Cap. (GPH) | Status |
|-----|----------------|-------------------------------|--|--------------|--------------|--------------|------------|--------|
| 77  | Pishin         | Alizai                        | WSS Alizai Tube Well                   | X            | -            | -            | 500        | fu     |
| 78  | Pishin         | Gangalzai                     | WW Gangulzai Near T/W No. I            | X            | -            | -            | 500        | fu     |
| 79  | Pishin         | Hajian Shakerzai              | Near Masjid                            | X            | -            | -            | 500        | fu     |
| 80  | Pishin         | Manzari                       | Near Manzari Adha                      | X2           | -            | -            | 500        | fu     |
| 81  | Pishin         | Huramzai                      | WSS Chur Badezai                       | X2           | -            | -            | 500        | fu     |
| 82  | Pishin         | Khanozai                      | Near Surkhab Road near girls           | X            | -            | -            | 500        | fu     |
| 83  | Pishin         | Yaro                          | Killi Ahmed Khailan near main road     | X            | -            | -            | 500        | fu     |
| 84  | Pishin         | Bostan                        | Killi chowkal                          | X3           | -            | -            | 500        | fu     |
| 85  | Pishin         | Mughian                       | Near Main National Highway             | X            | -            | -            | 500        | fu     |
| 86  | Pishin         | Lumran                        | Killi Faizabad on main road            | X            | -            | -            | 500        | fu     |
| 87  | Pishin         | Balozai                       | On main Umerzai Road near girls        | X4           | -            | -            | 500        | fu     |
| 88  | Pishin         | Khustab                       | Killi Zarghoon near girls' high school | X4           | -            | -            | 500        | fu     |
| 89  | Pishin         | Dilsora                       | Killi Dilsora near WSS Dilsora         | X            | -            | -            | 500        | fu     |
| 90  | Pishin         | Rod Mulazai                   | Killi Yousaf Kach near storage tank    | X            | -            | -            | 500        | nf     |
| 91  | Pishin         | Kut                           | WSS Sara Khawa (Primary)               | X2           | -            | -            | 500        | nf     |
| 92  | Pishin         | Kach Hassanzai                | Killi Sharghali                        | X4           | -            | -            | 500        | fu     |
| 93  | Pishin         | Bagh                          | Killi Bagh                             | X            | -            | -            | 500        | fu     |
| 94  | Pishin         | Injani                        | Killi Injani                           | X2           | -            | -            | 500        | nf     |
| 95  | Pishin         | Walma                         | Near Walma Primary School              | X            | -            | -            | 500        | fu     |
| 96  | Killa Abdullah | Boghra                        | Killi Niaz T/ Well                     | X            | -            | -            | 1000       | fu     |
| 97  | Killa Abdullah | Lid Gah                       | Levies Thana                           | X2           | -            | -            | 1000       | fu     |
| 98  | Killa Abdullah | Chaman                        | Bore no.1 Chaman                       | X            | -            | -            | 1000       | fu     |
| 99  | Killa Abdullah | Mehmood Abad                  | WSS Stadium                            | X3           | -            | -            | 1000       | fu     |
| 100 | Killa Abdullah | Purana Chaman                 | Chakar Landi                           | X            | -            | -            | 500        | fu     |
| 101 | Killa Abdullah | Roghani-I                     | Roghni                                 | X2           | -            | -            | 500        | fu     |
| 102 | Killa Abdullah | Roghani-II                    | Gori Khole                             | X3           | X4           | -            | 500        | fu     |
| 103 | Killa Abdullah | Daman Mir Alizai              | Chaman Phase III                       | X3           | X4           | -            | 500        | fu     |
| 104 | Killa Abdullah | Sirki Talrii                  | Killi Habib Jan                        | X2           | -            | -            | 500        | fu     |
| 105 | Killa Abdullah | Girdi Pinki                   | Anwar Pinki                            | X            | -            | -            | 500        | fu     |
| 106 | Killa Abdullah | Gulistan-I                    | Qasim Khan                             | X            | -            | -            | 500        | fu     |
| 107 | Killa Abdullah | Gulistan-II                   | Lajwar                                 | X            | -            | -            | 500        | fu     |
| 108 | Killa Abdullah | Segi                          | Sagi                                   | X2           | -            | -            | 500        | fu     |
| 109 | Killa Abdullah | Darozai                       | Nourak S. Khail                        | X            | -            | -            | 500        | fu     |
| 110 | Killa Abdullah | Adul Rehmanzai                | Abdul Rehmanzai                        | X            | -            | -            | 500        | fu     |
| 111 | Killa Abdullah | KLA-I                         | K.A Bazar-I Levies Thana               | X            | -            | -            | 1000       | fu     |
| 112 | Killa Abdullah | KLA-II                        | Girls' Middle School Kulak             | X            | -            | -            | 1000       | fu     |
| 113 | Killa Abdullah | Jani Deh                      | WSS Jani Deh                           | X            | -            | -            | 500        | fu     |
| 114 | Killa Abdullah | Maizai                        | Maizai Mosque                          | X            | -            | -            | 500        | fu     |
| 115 | Killa Abdullah | Masezai                       | Killi Maizai                           | X            | -            | -            | 500        | nf     |
| 116 | Killa Abdullah | Pir Alizai                    | Tore Khail WSS                         | X4           | -            | -            | 500        | fu     |
| 117 | Killa Abdullah | Habibzai                      | WSS Habibzai                           | X2           | -            | -            | 500        | fu     |

| S#  | District   | Name of Plant / Union Council | Location                       | Plant Type 1 | Plant Type 2 | Plant Type 3 | Cap. (GPH) | Status |
|-----|------------|-------------------------------|--------------------------------|--------------|--------------|--------------|------------|--------|
| 118 | Nushki     | Nushki II                     | WSS Ghareebabad                | X            | -            | -            | 500        | fu     |
| 119 | Nushki     | Mengal                        | WSS Mengal                     | X            | -            | -            | 500        | nf     |
| 120 | Nushki     | Badini                        | WSS Sadda Bazaar               | X            | -            | -            | 500        | fu     |
| 121 | Nushki     | Kshingi                       | WSS Khrazai                    | X            | -            | -            | 500        | nf     |
| 122 | Nushki     | Anam Bostan                   | WSS Gaznali                    | X2           | -            | -            | 500        | fu     |
| 123 | Nushki     | Dak                           | WSS Essacha                    | X            | -            | -            | 500        | nf     |
| 124 | Nushki     | Ahmadwal                      | WSS Ahmadwal                   | X            | -            | -            | 500        | fu     |
| 125 | Nushki     | Bhaghak Mall                  | WSS Bhaghak Mal                | X            | -            | -            | 500        | fu     |
| 126 | Kachhi     | Bhag                          | Village Bhag                   | X2           | X3           | -            | 1000       | fu     |
| 127 | Kachhi     | Jalal Khan                    | Jalal Khan                     | X2           | -            | -            | 500        | fu     |
| 128 | Kachhi     | Chalgari                      | Chalgari                       | X2           | X3           | -            | 500        | nf     |
| 129 | Kachhi     | Noushera                      | Pahore                         | X2           | -            | -            | 500        | nf     |
| 130 | Kachhi     | UC Dhadar                     | Near Circuit House PHED water  | X2           | -            | -            | 1000       | fu     |
| 131 | Kachhi     | Mashkaf                       | Mashkaf village                | X2           | X3           | -            | 500        | fu     |
| 132 | Kachhi     | Saleh Abad (Rind au)          | Office of U/C Nazim Salehabad  | X2           | -            | -            | 1000       | nf     |
| 133 | Kachhi     | Gore                          | Gore                           | X2           | -            | -            | 500        | nf     |
| 134 | Kachhi     | Mithri                        | Mithri village                 | X2           | -            | -            | 500        | nf     |
| 135 | Kachhi     | Kot Raisani                   | Kot Khai                       | X2           | X3           | -            | 500        | nf     |
| 136 | Kachhi     | Mach                          | Railway Colony Mach City       | X2           | -            | -            | 1000       | nf     |
| 137 | Kachhi     | Mach Town                     | Sumalani colony Much town      | X2           | X3           | -            | 1000       | fu     |
| 138 | Kachhi     | Kolpur                        | Takri Saeed Khan               | X            | -            | -            | 500        | nf     |
| 139 | Kachhi     | Saddar Satakzai               | Killi sadar satakzai           | X            | -            | -            | 500        | fu     |
| 140 | Kachhi     | Abe-Gum                       | Abe Ghum Village               | X            | -            | -            | 500        | nf     |
| 141 | Kachhi     | Sunni                         | Sunni                          | X3           | -            | -            | 500        | fu     |
| 142 | Kachhi     | Shoran                        | Shoran                         | X3           | -            | -            | 500        | fu     |
| 143 | Kachhi     | Easubani                      | Y Easubani                     | X4           | -            | -            | 500        | nf     |
| 144 | Kachhi     | Khattan                       | Mehsor Boosting Station        | X4           | -            | -            | 500        | nf     |
| 145 | Jaffarabad | Cattle Farm                   | Noor Muhammad Narwa            | X            | -            | -            | 500        | fu     |
| 146 | Jaffarabad | Hafeezabad                    | Hafeezabad City                | X2           | -            | -            | 500        | fu     |
| 147 | Jaffarabad | Rojhan Jamali                 | Kashnir Kot                    | X2           | -            | -            | 500        | fu     |
| 148 | Jaffarabad | Samoo                         | Goth Abdul Karim               | X2           | -            | -            | 500        | fu     |
| 149 | Jaffarabad | Band Manik                    | Goth Lal Bakhsh Khoso          | X2           | -            | -            | 500        | fu     |
| 150 | Jaffarabad | Naseerabad                    | Goth Abdul Ghafoor Lahri       | X2           | -            | -            | 500        | fu     |
| 151 | Jaffarabad | Dera AllahYar-I               | Near Zila Nazim Office         | X2           | -            | -            | 500        | fu     |
| 152 | Jaffarabad | Dera AllahYar-IE              | Anaji Mandi SohbatPur Chow Moh | X2           | -            | -            | 500        | fu     |
| 153 | Jaffarabad | Dera AllahYar-III             | Near Tehsil Nazim Office       | X2           | -            | -            | 500        | fu     |
| 154 | Jaffarabad | Dera AllahYar-IV              | Khan Garh Jamali               | X2           | -            | -            | 500        | fu     |
| 155 | Jaffarabad | Chalgari                      | Goth Ismail Chalgari           | X2           | X3           | -            | 500        | fu     |
| 156 | Jaffarabad | Soorab                        | Goth Roshan Khan Jamali        | X2           | -            | -            | 500        | fu     |
| 157 | Jaffarabad | Yet Ghar                      | Goth Haji Khan Khoso           | X            | -            | -            | 500        | fu     |
| 158 | Jaffarabad | Ramzey                        | Goth Haji Amir Bakhsh Khoso    | X2           | -            | -            | 500        | fu     |

| S#  | District   | Name of Plant / Union Council | Location                         | Plant Type 1 | Plant Type 2 | Plant Type 3 | Cap. (GPH) | Status |
|-----|------------|-------------------------------|----------------------------------|--------------|--------------|--------------|------------|--------|
| 159 | Jaffarabad | Roopa                         | Jahan Ali                        | X2           | X3           | -            | 500        | fu     |
| 160 | Jaffarabad | Noor Pur                      | Nasrullah Chowk                  | X            | -            | -            | 500        | fu     |
| 161 | Jaffarabad | Ghari                         | Goth Mohammad Amin Khoso         | X            | -            | -            | 500        | fu     |
| 162 | Jaffarabad | Drighi                        | Goth Abdul Sattar Khoso          | X2           | -            | -            | 500        | fu     |
| 163 | Jaffarabad | Khudaidad                     | Goth Murad Ali                   | X2           | -            | -            | 500        | fu     |
| 164 | Jaffarabad | NozeBand                      | Goth Rasool Bakhsh Khoso         | X2           | X3           | -            | 500        | fu     |
| 165 | Jaffarabad | Sadar Sohbatpur               | Khiar Pur                        | X2           | -            | -            | 500        | fu     |
| 166 | Jaffarabad | Sohbatpur                     | Sohbat Pur City                  | X2           | X3           | -            | 500        | nf     |
| 167 | Jaffarabad | Gandar                        | Manjhipur proper                 | X2           | X3           | -            | 1000       | fu     |
| 168 | Jaffarabad | Hamid Pur                     | Hamidpur village                 | X2           | -            | -            | 500        | fu     |
| 169 | Jaffarabad | Khanpur                       | Khanpur Jamali                   | X            | -            | -            | 500        | fu     |
| 170 | Jaffarabad | Ali Abad y                    | Haji Shabir Umrani               | X2           | -            | -            | 500        | fu     |
| 171 | Jaffarabad | n/a                           | Goth Rustam Khan Jamali          | X            | -            | -            | 500        | fu     |
| 172 | Jaffarabad | Samejee                       | Goth Foja Khan Jamali            | X            | -            | -            | 500        | fu     |
| 173 | Jaffarabad | Faiz Abad                     | Faizabad village                 | X3           | -            | -            | 500        | fu     |
| 174 | Jaffarabad | Piralabad                     | Piara khan village               | X2           | -            | -            | 500        | fu     |
| 175 | Jaffarabad | Qaboola                       | Goth Mohammad Nawaz Rind         | X3           | -            | -            | 500        | fu     |
| 176 | Jaffarabad | Mehrab Pur                    | Mehrab Pur                       | X            | -            | -            | 500        | nf     |
| 177 | Jaffarabad | Sobdrani-II                   | Manzoor Bakhshlani               | X            | -            | -            | 500        | fu     |
| 178 | Jaffarabad | Usta Muhammad-I               | Abra Mohallah                    | X            | -            | -            | 1000       | fu     |
| 179 | Jaffarabad | Usta Muhammad-II              | Near Girls High School at Civil  | X            | -            | -            | 1000       | fu     |
| 180 | Jaffarabad | Usta Muhammad-III             | Near Dargah Hazrat Faiz Sultan   | X            | -            | -            | 1000       | fu     |
| 181 | Jaffarabad | Usta Muhammad-IV              | Ali Abad Road                    | X            | -            | -            | 1000       | fu     |
| 182 | Jaffarabad | Hadeera                       | Goth Haji Allah Waraya Jamali    | X3           | -            | -            | 500        | fu     |
| 183 | Jaffarabad | Gandakha                      | Goth Ghulam Muhammad             | X            | -            | -            | 1000       | fu     |
| 184 | Jaffarabad | Sobdarani                     | Goth Chowki Jamali               | X2           | -            | -            | 500        | fu     |
| 185 | Jaffarabad | Kariya Peri                   | Baghtail Chowk                   | X2           | X3           | -            | 500        | fu     |
| 186 | Jaffarabad | Nushki Jadid                  | Nushki Jadeed                    | X2           | -            | -            | 500        | fu     |
| 187 | Jaffarabad | Bagh Head                     | Goth Bagh Head                   | X            | -            | -            | 500        | nf     |
| 188 | Jaffarabad | SIB Jadid                     | Goth Soba Khan Rind              | X            | -            | -            | 500        | fu     |
| 189 | Jaffarabad | Ahmed Abad                    | Goth Ahmad Abad Proper           | X3           | -            | -            | 500        | fu     |
| 190 | Nasirabad  | Gharbi D. M. Jamali           | Wapda Colony                     | X2           | X3           | -            | 500        | fu     |
| 191 | Nasirabad  | Sharki D.M.Jamali             | Govt Girls School Joda Khan Joyo | X2           | X3           | -            | 1000       | fu     |
| 192 | Nasirabad  | Manjhooti Gharbi              | WSS Juma Khan Umrani             | X3           | -            | -            | 500        | fu     |
| 193 | Nasirabad  | Manjhooti Sharki              | Village Shezada Khan Umrani      | X2           | -            | -            | 500        | fu     |
| 194 | Nasirabad  | Bedar                         | WSS Changezi Than Sasoli         | X2           | X3           | -            | 500        | fu     |
| 195 | Nasirabad  | Jhudair Shumali               | WSS Goth Majeed Lehri            | X2           | -            | -            | 500        | fu     |
| 196 | Nasirabad  | Jhudair Janoobi               | WSS Mir Gul Mossiani             | X2           | X3           | -            | 500        | fu     |
| 197 | Nasirabad  | Quba Sher Khan                | WSS Aziz Abad Jamali             | X2           | X3           | -            | 500        | fu     |
| 198 | Nasirabad  | Manjho Shori                  | WSS Manjoo Shori                 | X2           | X3           | -            | 500        | fu     |
| 199 | Nasirabad  | Gola Wah                      | WSS Gulam Nabi Marri             | X2           | X3           | -            | 500        | nf     |

| S#  | District   | Name of Plant / Union Council | Location                          | Plant Type 1 | Plant Type 2 | Plant Type 3 | Cap. (GPH) | Status |
|-----|------------|-------------------------------|-----------------------------------|--------------|--------------|--------------|------------|--------|
| 200 | Nasirabad  | Mir Wah                       | WSS Mir Wah Village               | X2           | X3           | -            | 500        | fu     |
| 201 | Nasirabad  | Abdullah Barri                | WSS Juma Khan                     | X2           | X3           | -            | 500        | fu     |
| 202 | Nasirabad  | Babu Kot                      | Baba Kot Village                  | X2           | X3           | -            | 500        | nf     |
| 203 | Nasirabad  | Allah Abad                    | WSS Sher mohd Umrani              | X2           | -            | -            | 500        | fu     |
| 204 | Nasirabad  | Khros Wah                     | WSS Taj Mohammad Lehri            | X            | -            | -            | 500        | nf     |
| 205 | Nasirabad  | Fateh Mohammad                | Goth Fateh Mohammad               | X2           | X3           | -            | 500        | fu     |
| 206 | Nasirabad  | Kohang Tamboo                 | Goth Rasool Bux                   | X2           | -            | -            | 500        | fu     |
| 207 | Nasirabad  | Ali Abad                      | WSS Jan Mohammad Mengal           | X2           | X3           | -            | 500        | fu     |
| 208 | Nasirabad  | Shahpur                       | WSS Son wah                       | X2           | X3           | -            | 500        | nf     |
| 209 | Nasirabad  | Doulat Ghari                  | WSS Mir Hassan                    | X            | -            | -            | 500        | fu     |
| 210 | Nasirabad  | Shori Dharbi                  | WSS Goth Akhtar Zaman             | X2           | X3           | -            | 500        | fu     |
| 211 | Jhal Magsi | JHM                           | Near Nazim House                  | X            | -            | -            | 1000       | fu     |
| 212 | Jhal Magsi | Khan Pur (Panjuk)             | Panjuk                            | X            | -            | -            | 500        | fu     |
| 213 | Jhal Magsi | Barija                        | Saifabad                          | X            | -            | -            | 500        | fu     |
| 214 | Jhal Magsi | Kot Magsi                     | Chukhi village                    | X            | -            | -            | 500        | fu     |
| 215 | Jhal Magsi | Hatyari                       | Hathyari                          | X            | -            | -            | 500        | fu     |
| 216 | Jhal Magsi | Gandawa                       | Mohalla Qazi                      | X2           | -            | -            | 1000       | fu     |
| 217 | Jhal Magsi | Khari                         | Khari Village                     | X            | -            | -            | 500        | fu     |
| 218 | Jhal Magsi | Pithri                        | Gajan                             | X2           | -            | -            | 500        | fu     |
| 219 | Jhal Magsi | Mir Pur                       | Kota Village                      | X            | -            | -            | 500        | fu     |
| 220 | Zhob       | Islamyar Zhob                 | Islamyar Muhallah                 | X            | -            | -            | 1000       | fu     |
| 221 | Zhob       | Nasir Abad                    | Nasar A)bad No.1 Zhob Town        | X            | -            | -            | 500        | fu     |
| 222 | Zhob       | Gunj Muhallah                 | Gunj Muhallah ZhobTown            | X4           | -            | -            | 500        | fu     |
| 223 | Zhob       | Sambazah                      | Gustoi Hazarat Sahib              | X            | -            | -            | 500        | fu     |
| 224 | Zhob       | Sheikhan                      | Sheikhan                          | X2           | -            | -            | 500        | fu     |
| 225 | Zhob       | Appozai                       | Appozai Saqi 2-K.M from.zhob town | X2           | -            | -            | 500        | fu     |
| 226 | Zhob       | Hassanzai                     | Hassanzai                         | X2           | -            | -            | 500        | nf     |
| 227 | Zhob       | Wala Alcram                   | Loi Mena                          | X            | -            | -            | 500        | nf     |
| 228 | Zhob       | Laka Band                     | Kill Roidad                       | X            | -            | -            | 500        | fu     |
| 229 | Zhob       | Babar                         | Girdah Baber                      | X            | -            | -            | 500        | fu     |
| 230 | Zhob       | Meena Bazar                   | Meena Bazar                       | X            | -            | -            | 500        | fu     |
| 231 | Zhob       | Omza Wiala                    | Killa Akhter                      | X            | -            | -            | 500        | fu     |
| 232 | Zhob       | Tang Sar                      | Paind Wala Zakriazai              | X            | -            | -            | 500        | fu     |
| 233 | Zhob       | Barak Wala                    | Saloon                            | X            | -            | -            | 500        | fu     |
| 234 | Zhob       | Shahbzai                      | Tora Khula                        | X            | -            | -            | 500        | fu     |
| 235 | Zhob       | Qamer Din                     | Qamar Din Town                    | X            | -            | -            | 500        | fu     |
| 236 | Zhob       | Badazai                       | Tora Shah                         | X            | -            | -            | 500        | fu     |
| 237 | Zhob       | Ashewat                       | Killi Narezeba                    | X            | -            | -            | 500        | fu     |
| 238 | Zhob       | Shaghalu                      | Killi Ghagri                      | X            | -            | -            | 500        | fu     |
| 239 | Sherani    | Mughal Kot                    | Mir AliKhail                      | X            | -            | -            | 500        | fu     |
| 240 | Sherani    | Ahinedi Dargah                | Killi Ashashiti                   | X            | -            | -            | 500        | fu     |



| S#  | District        | Name of Plant / Union Council | Location                             | Plant Type 1 | Plant Type 2 | Plant Type 3 | Cap. (GPH) | Status |
|-----|-----------------|-------------------------------|--------------------------------------|--------------|--------------|--------------|------------|--------|
| 241 | Sherani         | Mani Khawa                    | Killi Master Umer                    | X            | -            | -            | 500        | fu     |
| 242 | Sherani         | Kapip                         | Killi Khan Alam                      | X            | -            | -            | 500        | nf     |
| 243 | Sherani         | Shin Ghar Harifal North       | Dowl Gud                             | X2           | -            | -            | 500        | nf     |
| 244 | Sherani         | Shin Ghar South               | Duria Kahazai                        | X            | -            | -            | 500        | fu     |
| 245 | Loralai         | Loralai-I                     | Police Line                          | X2           | -            | -            | 1000       | fu     |
| 246 | Loralai         | Loralai-1I                    | New Addha                            | X            | -            | -            | 1000       | fu     |
| 247 | Loralai         | Loralai-III                   | Pathan Muhalla                       | X            | -            | -            | 1000       | fu     |
| 248 | Loralai         | Kach Amakzai                  | Killi Kuch Ahmaq Zai                 | X            | -            | -            | 500        | fu     |
| 249 | Loralai         | Sadar Bori                    | Killi Majeed                         | X2           | -            | -            | 500        | fu     |
| 250 | Loralai         | Uryagi                        | Killi Rasheed Nasir                  | X2           | -            | -            | 500        | fu     |
| 251 | Loralai         | Poonga                        | Haji Abdul Manan                     | X            | -            | -            | 500        | fu     |
| 252 | Loralai         | Lahore                        | Killi Shabozai                       | X2           | -            | -            | 500        | fu     |
| 253 | Loralai         | Cheena Alizai                 | Madrassa Bumima                      | X            | -            | -            | 500        | fu     |
| 254 | Loralai         | Mekhter                       | Killi Baz Burlad                     | X2           | -            | -            | 500        | fu     |
| 255 | Loralai         | Tore                          | Tora Thana                           | X            | -            | -            | 500        | fu     |
| 256 | Loralai         | Urban Duki                    | B&R Colony                           | X            | -            | -            | 1000       | fu     |
| 257 | Loralai         | Sadar Duki                    | Gareebabad                           | X            | -            | -            | 500        | nf     |
| 258 | Loralai         | Nasir Abad                    | Nasirabad                            | X            | -            | -            | 500        | fu     |
| 259 | Loralai         | Viala Duki                    | Killi Haider Nasir                   | X            | -            | -            | 500        | fu     |
| 260 | Loralai         | Wahvi                         | Bunhar                               | X            | -            | -            | 500        | nf     |
| 261 | Loralai         | Gharbi Luni                   | Sardar Jangle                        | X            | -            | -            | 500        | nf     |
| 262 | Loralai         | Sharki Luni                   | Killi Maroozai (Taj Mohammad)        | X            | -            | -            | 500        | fu     |
| 263 | Loralai         | Lalchi                        | Haidar Khan Sangori                  | X            | -            | -            | 500        | nf     |
| 264 | Loralai         | Thal                          | Sadar Shaher                         | X2           | -            | -            | 500        | nf     |
| 265 | Killa Saifullah | Town Killa Saifullah          | Town Killa Saifullah                 | X            | -            | -            | 500        | fu     |
| 266 | Killa Saifullah | Sadar Killa Saifullah         | Killi Bandat Fatozai                 | X2           | X3           | -            | 500        | fu     |
| 267 | Killa Saifullah | Akhterzai                     | WSS Gamargai                         | X            | -            | -            | 500        | fu     |
| 268 | Killa Saifullah | Batozai                       | Killi Shailushta Hayderzai           | X2           | -            | -            | 500        | fu     |
| 269 | Killa Saifullah | Musafarpur                    | WSS Pitaw Ghorazai                   | X            | -            | -            | 500        | fu     |
| 270 | Killa Saifullah | Sheren Jogazai                | Killi Jafar Khan                     | X2           | -            | -            | 500        | nf     |
| 271 | Killa Saifullah | Badini                        | Badini                               | X2           | -            | -            | 500        | nf     |
| 272 | Killa Saifullah | Town Muslim Bagh              | Ambur Ghundi                         | X2           | -            | -            | 500        | fu     |
| 273 | Killa Saifullah | Sadar Muslim Bagh             | Nasirwalla                           | X2           | -            | -            | 500        | fu     |
| 274 | Killa Saifullah | Nasai                         | Ghundamana                           | X2           | -            | -            | 500        | fu     |
| 275 | Killa Saifullah | Kanchogi                      | Kech Mollazai                        | X2           | -            | -            | 500        | fu     |
| 276 | Killa Saifullah | Loi Band                      | Loi Band Village                     | X2           | -            | -            | 500        | nf     |
| 277 | Killa Saifullah | Murgha Faqirzai               | Babu China                           | X2           | -            | -            | 500        | nf     |
| 278 | Barkhan         | Barkhan                       | Basti Hakimani                       | X4           | -            | -            | 1000       | fu     |
| 279 | Barkhan         | Gadai Barkhan                 | Near DC office                       | X2           | -            | -            | 500        | fu     |
| 280 | Barkhan         | Sadar Barkhan                 | Machrani village (PHED Water Works ) | X2           | -            | -            | 500        | nf     |
| 281 | Barkhan         | Baghao                        | Basti Sher Shah (WSS Daman)          | X2           | -            | -            | 500        | nf     |

| S#  | District   | Name of Plant / Union Council | Location                           | Plant Type 1 | Plant Type 2 | Plant Type 3 | Cap. (GPH) | Status |
|-----|------------|-------------------------------|------------------------------------|--------------|--------------|--------------|------------|--------|
| 282 | Barkhan    | Rakhni                        | Dekha Qasimani                     | X4           | -            | -            | 500        | fu     |
| 283 | Sibi       | SIB-I                         | Luni road Phase I                  | X            | X2           | X3           | 500        | fu     |
| 284 | Sibi       | SIB-II                        | Offier Club SIB                    | X2           | X3           | -            | 500        | fu     |
| 285 | Sibi       | SIB-III                       | Old Female Hospital                | X2           | X3           | -            | 500        | fu     |
| 286 | Sibi       | SIB-IV                        | Allahabad                          | X2           | X3           | -            | 500        | fu     |
| 287 | Sibi       | Marghzani                     | Dehpal Kalan                       | X2           | -            | -            | 500        | fu     |
| 288 | Sibi       | Kurak                         | Khajak village                     | X            | X2           | X3           | 500        | fu     |
| 289 | Sibi       | Talli                         | Tali                               | X2           | X3           | -            | 500        | fu     |
| 290 | Sibi       | Treher                        | Treher                             | X            | -            | -            | 500        | nf     |
| 291 | Sibi       | Tunia (Bakhtiarabad)          | PHED Office Bakhtiarabad           | X4           | -            | -            | 500        | fu     |
| 292 | Sibi       | Khatpur Shareef (Tunia)       | Khatpur Sharif village             | X3           | -            | -            | 500        | nf     |
| 293 | Harnai     | Urban                         | Akhtarabad                         | X3           | -            | -            | 1000       | fu     |
| 294 | Harnai     | Sadar HAR                     | Killi Kifindrani                   | X3           | -            | -            | 500        | fu     |
| 295 | Harnai     | Babihan                       | Bazar Spintangi                    | X3           | -            | -            | 500        | nf     |
| 296 | Harnai     | Nakus                         | Bazar Nakus                        | X3           | -            | -            | 500        | fu     |
| 297 | Harnai     | Shahrigh                      | Shaharage Bazar                    | X            | -            | -            | 500        | fu     |
| 298 | Harnai     | Khost                         | Bazar Khost                        | X            | -            | -            | 500        | fu     |
| 299 | Ziarat     | Ziarat                        | Near DCO House Ziarat Town         | X            | -            | -            | 1000       | fu     |
| 300 | Ziarat     | Zandra                        | Zaindrah stoc                      | X            | -            | -            | 500        | fu     |
| 301 | Ziarat     | Kawas                         | Kawas Pum                          | X            | -            | -            | 500        | fu     |
| 302 | Ziarat     | Kach                          | Kuch stop (Kan Depot)              | X2           | -            | -            | 500        | fu     |
| 303 | Ziarat     | Ghoski (Ziarat Town)          | Ghoski                             | X            | -            | -            | 1000       | nf     |
| 304 | Ziarat     | Saddar Sanjavi                | Anderabad                          | X2           | -            | -            | 500        | fu     |
| 305 | Ziarat     | Chotair                       | Chotair resthouse                  | X            | -            | -            | 500        | fu     |
| 306 | Ziarat     | Baghaw                        | Baghow stoc                        | X2           | -            | -            | 500        | fu     |
| 307 | Ziarat     | Poi                           | Poi bazar                          | X            | -            | -            | 500        | fu     |
| 308 | Ziarat     | Regorah                       | Rigurah Cross                      | X            | -            | -            | 500        | nf     |
| 309 | Kohlu      | Kohlu                         | Marri Colony                       | X4           | -            | -            | 1000       | fu     |
| 310 | Kohlu      | Pazza                         | Rahzan shahar                      | X            | -            | -            | 500        | nf     |
| 311 | Kohlu      | Uryani                        | Killi maithzai                     | X2           | -            | -            | 500        | fu     |
| 312 | Dera Bugti | Urban                         | Civil Colony                       | X            | X2           | X3           | 500        | fu     |
| 313 | Dera Bugti | Sangseela                     | Singsilah                          | X            | -            | -            | 500        | nf     |
| 314 | Dera Bugti | Phellawagh                    | High School Killi Haji Mian Khan   | X3           | -            | -            | 500        | fu     |
| 315 | Dera Bugti | Sui                           | Bugti Colony near Boys High School | X3           | -            | -            | 1000       | fu     |
| 316 | Khuzdar    | Ferozabad                     | WSS Pub Mass                       | X            | -            | -            | 1000       | fu     |
| 317 | Khuzdar    | Gazgi                         | WSS Gazgi                          | X            | -            | -            | 1000       | nf     |
| 318 | Khuzdar    | Lizo                          | WSS Irrigation Colony              | X3           | -            | -            | 1000       | fu     |
| 319 | Khuzdar    | Faizabad                      | WSS Faizabad near Civil Hospital   | X3           | -            | -            | 1000       | fu     |
| 320 | Khuzdar    | Khand                         | WSS Khand                          | X            | -            | -            | 500        | nf     |
| 321 | Khuzdar    | Balida Khattan                | WSS Kattan                         | X2           | -            | -            | 500        | nf     |
| 322 | Khuzdar    | Zarina Khattan                | WSS Khairawa                       | X3           | -            | -            | 500        | fu     |

| S#  | District | Name of Plant / Union Council | Location                          | Plant Type 1 | Plant Type 2 | Plant Type 3 | Cap. (GPH) | Status |
|-----|----------|-------------------------------|-----------------------------------|--------------|--------------|--------------|------------|--------|
| 323 | Khuzdar  | Zeedi                         | WSS Zeedi                         | X2           | -            | -            | 500        | fu     |
| 324 | Khuzdar  | Baghbana                      | WSS Mehmood Khani                 | X3           | -            | -            | 500        | fu     |
| 325 | Khuzdar  | Sasol                         | WSS Goro Bidrange                 | X2           | -            | -            | 500        | nf     |
| 326 | Khuzdar  | Tootak                        | WSS Tootak Sardari Shehr          | X            | -            | -            | 500        | fu     |
| 327 | Khuzdar  | Parko                         | Pvt tube well Parko sher          | X            | -            | -            | 500        | nf     |
| 328 | Khuzdar  | Chashma                       | WSS Dogon                         | X3           | -            | -            | 500        | nf     |
| 329 | Khuzdar  | Ghat                          | WSS Balbal                        | X            | -            | -            | 500        | nf     |
| 330 | Khuzdar  | Noorgama Zehri                | WSS Samwani                       | X            | -            | -            | 500        | nf     |
| 331 | Khuzdar  | Maynalo Moola                 | Killi Maynalo                     | X            | -            | -            | 500        | nf     |
| 332 | Khuzdar  | AbudKucuk                     | WSS Karkh Main Bazar              | X4           | -            | -            | 500        | nf     |
| 333 | Khuzdar  | Sun Chakoo                    | WSS Nikewjo                       | X            | -            | -            | 500        | nf     |
| 334 | Khuzdar  | Nal                           | WSS Nal-II                        | X            | -            | -            | 500        | nf     |
| 335 | Khuzdar  | Dumali                        | WSS Dumali                        | X3           | -            | -            | 500        | fu     |
| 336 | Khuzdar  | Hazarganit                    | WSS Hazarganji                    | X            | -            | -            | 500        | fu     |
| 337 | Khuzdar  | Sarage Gresha                 | WSS Sarage                        | X2           | -            | -            | 500        | fu     |
| 338 | Khuzdar  | Gowani                        | WSS Gowani                        | X3           | -            | -            | 500        | nf     |
| 339 | Khuzdar  | Ornach                        | WSS Nindo Dumb                    | X            | -            | -            | 500        | nf     |
| 340 | Khuzdar  | Kili Alam Khan                | Killi Alam Khan WSS               | X            | -            | -            | 500        | nf     |
| 341 | Khuzdar  | Wadh                          | WSS Killi Sher Jan                | X2           | -            | -            | 1000       | fu     |
| 342 | Khuzdar  | Badari                        | WSS Haji Naik Mohammed at Rest    | X            | -            | -            | 500        | fu     |
| 343 | Khuzdar  | Waheer                        | WSS Chashma Murad Khan            | X            | -            | -            | 500        | fu     |
| 344 | Khuzdar  | Loop                          | WSS Killi Abdul Karim             | X3           | -            | -            | 500        | nf     |
| 345 | Khuzdar  | Saroon                        | WSS Saroon                        | X            | -            | -            | 500        | nf     |
| 346 | Khuzdar  | ShahNoorani                   | WSS Shah noorani dargah           | X            | -            | -            | 500        | nf     |
| 347 | Khuzdar  | n/a                           | Balochistan Enginering University | X            | -            | -            | 500        | fu     |
| 348 | Khuzdar  | Peshi Kapper                  | WSS Peshi kapper                  | X            | -            | -            | 500        | nf     |
| 349 | Lasbela  | Bela                          | Rural Health centre Bela city     | X            | -            | -            | 1000       | nf     |
| 350 | Lasbela  | Shomali Velpat                | Goth Saleh chib                   | X            | -            | -            | 500        | nf     |
| 351 | Lasbela  | Janubi Velpat                 | Jam Yousafabad Danda              | X            | -            | -            | 500        | fu     |
| 352 | Lasbela  | Janubi Velpat                 | Goth Mossiani                     | X2           | -            | -            | 500        | nf     |
| 353 | Lasbela  | Kathore                       | Goth Issa                         | X            | -            | -            | 500        | fu     |
| 354 | Lasbela  | Uthal                         | Uthal City                        | X2           | -            | -            | 1000       | fu     |
| 355 | Lasbela  | Wayara                        | Kheer Golai Mauza Chotra          | X2           | -            | -            | 500        | fu     |
| 356 | Lasbela  | Pathra                        | Jamia Masjid                      | X            | -            | -            | 500        | fu     |
| 357 | Lasbela  | Baroot                        | Near Buldia Rest House            | X            | -            | -            | 500        | fu     |
| 358 | Lasbela  | Allah Abad                    | Near Fire Birgade office          | X            | -            | -            | 1000       | fu     |
| 359 | Lasbela  | Hubco                         | Gujar Goth near Bhawani Madrasa   | X            | -            | -            | 500        | fu     |
| 360 | Lasbela  | Gaddani                       | Gaddani Bazar                     | X            | -            | -            | 500        | nf     |
| 361 | Lasbela  | Dureji                        | Dureji Town Area                  | X            | -            | -            | 500        | nf     |
| 362 | Mastung  | Mastung-I                     | WSS Killi M. Shahi                | X2           | -            | -            | 1000       | fu     |
| 363 | Mastung  | Mastung-II                    | WSS Ghazgi                        | X2           | -            | -            | 1000       | fu     |

| S#  | District | Name of Plant / Union Council | Location                         | Plant Type 1 | Plant Type 2 | Plant Type 3 | Cap. (GPH) | Status |
|-----|----------|-------------------------------|----------------------------------|--------------|--------------|--------------|------------|--------|
| 364 | Mastung  | Alizai                        | Sheikh Taki                      | X2           | -            | -            | 1000       | fu     |
| 365 | Mastung  | Ghulam Parez (Shereenah)      | Killi Ghulam Parez               | X2           | X3           | -            | 500        | fu     |
| 366 | Mastung  | Krez Noth                     | WSS Noth                         | X2           | -            | -            | 500        | fu     |
| 367 | Mastung  | Sorgaz                        | Mastung Road WSS                 | X2           | -            | -            | 500        | fu     |
| 368 | Mastung  | Sorgaz                        | Killi Ghulam Haider Killi Sorgaz | X            | -            | -            | 500        | fu     |
| 369 | Mastung  | Kanak                         | WSS Killi Nawab Raisani kanak    | X2           | X3           | -            | 500        | fu     |
| 370 | Mastung  | Sheikh Wasil                  | WSS Diringer near Storage Tank   | X2           | -            | -            | 500        | fu     |
| 371 | Mastung  | Khad Khocha                   | Killi Lakhi Baran                | X2           | X3           | -            | 500        | fu     |
| 372 | Mastung  | Kirdgap                       | WSS Kirdgap                      | X2           | -            | -            | 500        | fu     |
| 373 | Mastung  | Soro                          | WSS Pasand Khan                  | X            | -            | -            | 500        | nf     |
| 374 | Mastung  | Spezand                       | Rangi tok                        | X2           | -            | -            | 500        | fu     |
| 375 | Mastung  | Isplangi                      | WSS Isplangi                     | X2           | -            | -            | 500        | fu     |
| 376 | Kalat    | City Kalat                    | Civil Hospital                   | X            | -            | -            | 1000       | fu     |
| 377 | Kalat    | Iskalko                       | Iskalko                          | X            | -            | -            | 500        | fu     |
| 378 | Kalat    | Dasht-e-Goran                 | Malakai Malguazar                | X            | -            | -            | 500        | fu     |
| 379 | Kalat    | Zard                          | Zard Abdullah                    | X            | -            | -            | 500        | fu     |
| 380 | Kalat    | Sadar Surab                   | Surkh                            | X            | -            | -            | 1000       | fu     |
| 381 | Kalat    | Shana                         | Killi Muhammad Umer              | X            | -            | -            | 500        | fu     |
| 382 | Kalat    | Marap                         | Killi Arif                       | X            | -            | -            | 500        | fu     |
| 383 | Kalat    | Nighar                        | Dun                              | X            | -            | -            | 500        | fu     |
| 384 | Kalat    | Hatyari                       | Sittani                          | X            | -            | -            | 500        | nf     |
| 385 | Kalat    | Toba                          | Toba                             | X            | -            | -            | 500        | fu     |
| 386 | Kalat    | Lakhorian                     | Lakhorian II                     | X            | -            | -            | 500        | nf     |
| 387 | Kalat    | Anjira                        | Anjeera near Rest House          | X            | -            | -            | 500        | nf     |
| 388 | Kech     | Aabsar                        | Murad Muhalla                    | X2           | -            | -            | 1000       | fu     |
| 389 | Kech     | Singanisar                    | Malik dad kareem mohallah        | X            | -            | -            | 1000       | fu     |
| 390 | Kech     | Turbat                        | Hospital Muhalla                 | X            | -            | -            | 1000       | nf     |
| 391 | Kech     | Malikabad                     | Chashsar                         | X            | -            | -            | 500        | fu     |
| 392 | Kech     | Koshkalat                     | Killi Koshak PHED                | X2           | -            | -            | 500        | fu     |
| 393 | Kech     | Sarikahn                      | Muhallah Haji Usman              | X2           | -            | -            | 500        | fu     |
| 394 | Kech     | Sami                          | WSS Sami                         | X            | -            | -            | 500        | fu     |
| 395 | Kech     | Shahrak                       | Killi Shahrak                    | X2           | -            | -            | 500        | fu     |
| 396 | Kech     | Kalatuk                       | PHED WSS                         | X2           | -            | -            | 500        | fu     |
| 397 | Kech     | Nasirabad                     | Balnigor                         | X            | -            | -            | 500        | nf     |
| 398 | Kech     | Kuddan                        | Kujnbail                         | X            | -            | -            | 500        | nf     |
| 399 | Kech     | Koncheti                      | Kunchti                          | X2           | -            | -            | 500        | nf     |
| 400 | Kech     | Zarainbug                     | Zareen Bug                       | X            | -            | -            | 500        | nf     |
| 401 | Gawadar  | GWD Northern                  | PHED Colony                      | X            | -            | -            | 1000       | fu     |
| 402 | Gawadar  | GWD Southern                  | National Hospital                | X            | -            | -            | 1000       | fu     |
| 403 | Gawadar  | Surbandar                     | Near Water Works                 | X            | -            | -            | 500        | fu     |
| 404 | Gawadar  | Pishukan                      | Near Water Works                 | X            | -            | -            | 500        | fu     |

| S#  | District | Name of Plant / Union Council | Location               | Plant Type 1 | Plant Type 2 | Plant Type 3 | Cap. (GPH) | Status |
|-----|----------|-------------------------------|------------------------|--------------|--------------|--------------|------------|--------|
| 405 | Gawadar  | Jiwani                        | B&R Rest House Suntsar | X2           | -            | -            | 1000       | fu     |
| 406 | Gawadar  | Suntsar                       | Sunstar Rest House     | X            | -            | -            | 500        | fu     |
| 407 | Gawadar  | Pasni Northern                | PHED R. House .        | X2           | -            | -            | 1000       | fu     |
| 408 | Gawadar  | Pasni South                   | Raig Pasht             | X            | -            | -            | 1000       | fu     |
| 409 | Gawadar  | Hud                           | Hud Bazar              | X2           | -            | -            | 500        | nf     |

## EVALUATION MATRIX

### CDWA Project Evaluation Matrix

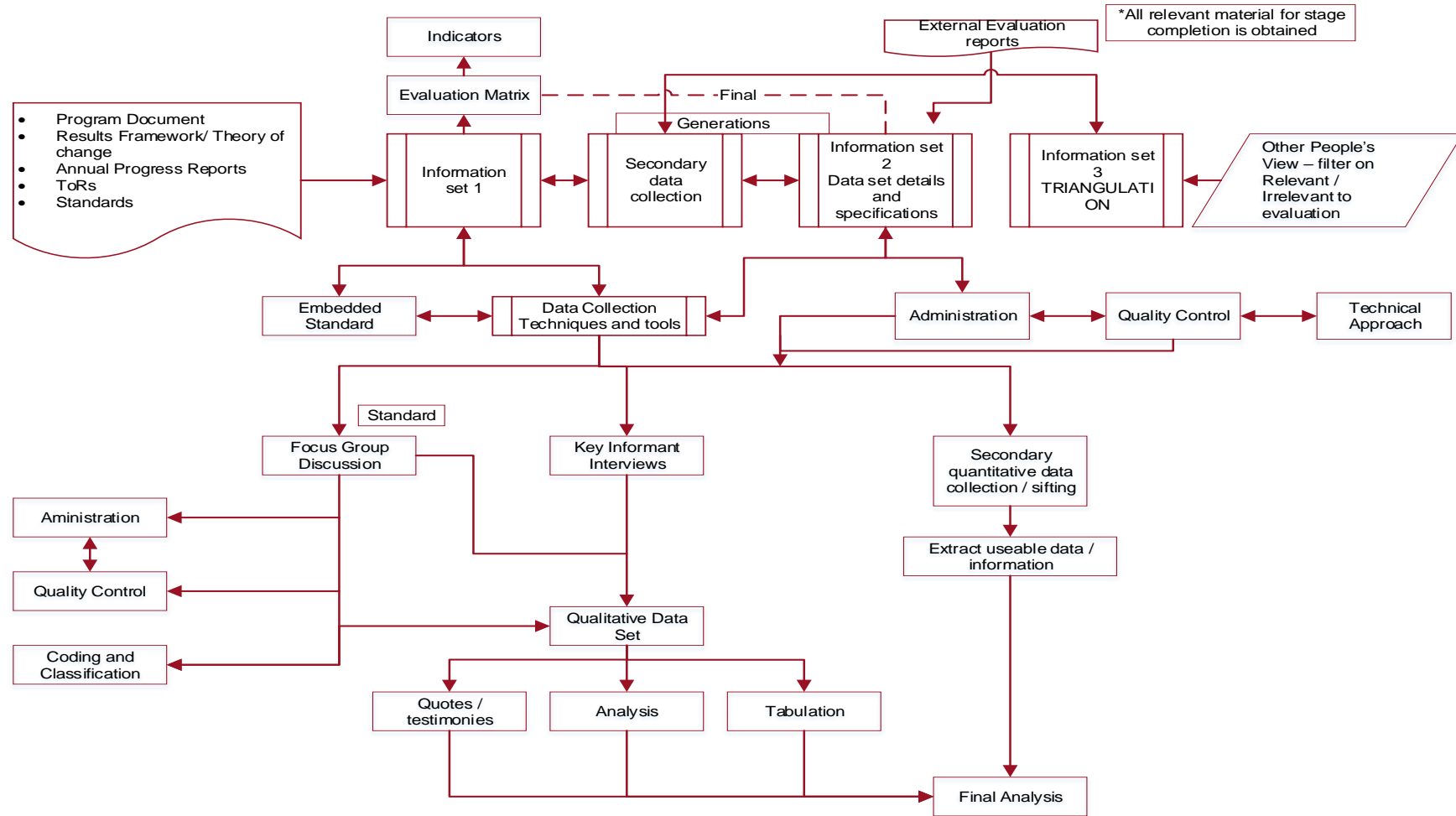
| Evaluation aspect | EQ# | Evaluation Question (EQ)  | Indicator(s)  | Eval. Tool      | Secondary Data (SD) sources  |
|-------------------|-----|---|---|-----------------|--|
| Relevance         | 1.0 | How relevant were the CDWA interventions to the needs and concerns of local people across various socioeconomic groups (including men, women and children from the mainstream culture and from minority communities) in the project target districts? | Distribution of water quality related issues before WFP installations; Comparison of health issues prevalent at the baseline stage; Water availability per capita at the baseline stage | KIIs, SD        | Baseline; Population density based UC selection; Other material on water-related supply and issues, programmes of GoP and GoB  |
| Effectiveness     | 2.1 | How effective was the CDWA project in providing access to clean drinking water to target communities and addressing other objectives the project might have?  | Distribution of water quality related issues before and after WFP installations; Comparison of health issues to provided solutions; Water availability per capita after installation    | KIIs, FGDs, HHS | Implementation Plan and tools, including Internal Monitoring; Population density based UC selection; Water sampling data quality and tests used for site selection; Operational preparedness documents |
|                   | 2.2 | Was the design of the WFPs appropriate to the context (ecology, water table, physical and chemical composition of groundwater)? Was the selection of the WFP site effectively done?   | Distribution of WFP types by site potential   | KIIs, FGDs, HHS | Site Selection Criteria; WFP design; Baseline  |
|                   | 2.3 | From an institutional perspective, how effective were the communications between the levels of the Government and the funding agency, and between the implementers and local community leaders and members?   | Frequency and quality of communications; Ratio of resolved problems to unresolved issues  | KIIs, SD        | Project communications; Meeting Minutes, etc.; Agreements between parties;   |
|                   | 2.4 | How effective has the P&DD been in incorporating and absorbing, within annual provincial budgets, the operational, upgrade and maintenance costs for installed plants?  | Trend in budget allocation per year of operation  | KIIs, SD        | Allocations in Annual Development Plans in the pre and post GoP 3-year development and implementation period; Operational preparedness documents   |
| Efficiency        | 3.1 | How successful was the project in managing resources (human, material and financial resources) and ensuring that the most timely, cost-effective delivery.  | Attrition rate of deployed HR; Cost per unit water pumped; Cost per unit water supplied; Operational cost per WFP per year including key supplies                                       | KIIs, SD        | Allocations in Annual Development Plans of the post GoP period; Human Resource deployment documents;   |
|                   | 3.2 | How efficiently were the WFP staff selected, trained and retained?  | Quality and application (transparency, qualification, etc.) of the Staff selection criteria   | KIIs, SD        | Staff selection documentation; HR related documents on leaves, problems, etc. Minutes of meetings related to/on  |

## CDWA Project Evaluation Matrix

| Evaluation aspect       | EQ# | Evaluation Question (EQ)  | Indicator(s)   | Eval. Tool            | Secondary Data (SD) sources   |
|-------------------------|-----|---|--|-----------------------|---|
|                         |     |   |  |                       | management decisions on HR matters  |
|                         | 3.3 | Was the budgeted recurring costs efficiently disbursed on time?   | Number and frequency of WFP shutdowns related to power outages & disconnections, shortage of supplies and absence of trained / qualified HR  | KIIs, SD              | AG Audit Reports; Correspondence related to operational funds; Electricity bills; procurement documentation on supplies; Operational reports; Internal Monitoring Reports |
|                         | 3.4 | How efficiently was power outages and cuts managed to ensure appropriate water supply to intended beneficiaries?  | Number and frequency of WFP shutdowns related to power outages & disconnections; Distribution and use of backup power types and arrangements per site; Alternate operational time plans and arrangements   | KIIs, SD              | Correspondence related to operational funds; Electricity bills; procurement documentation on supplies; Operational reports; Internal Monitoring Reports                   |
| Outcomes / Impacts      | 4.0 | What are the long-term outcomes of the CDWA interventions aimed at providing clean drinking water?  | Increase in supply of clean drinking water to communities; Decrease in health problems related to water quality;   | KIIs, FGDs<br>HHS, SD | News articles on water-related issues; Documentation/reports on drinking water supply issues during natural disasters   |
| Sustainability          | 5.0 | To what degree are the benefits of the CDWA interventions, in terms of both outcomes and impacts, expected to persist after the intervention period? What are the most important factors responsible for the achievement or failure of the intervention's overall sustainability? | Degree of operational budget allocations and disbursements; Degree of Disaster preparedness; Community ownership of installed plants; Ratio of functional and non-functional plants by type of reason; Internalization of WFP operations within District Management    | KIIs, HHS, SD         | PDMA Disaster Preparedness and Recovery Plans; Operational Plans; BMR Plans and implementation documentation;   |
| HRBA, Gender and Equity | 6.1 | To what extent were crosscutting issues such as gender equity, inclusion, climate change and social upheaval (such as natural disasters, internal displacement) considered and addressed in the design and implementation of the project?   | WFP design consideration on accessibility; Distribution of WFPs by type of location, population density, geographic and social context; Arrangements for ease of accessibility of women, children and the physically challenged people in the beneficiary communities; | KIIs, FGDs,<br>HHS    | None identified at this stage   |
|                         | 6.2 | If these were not addressed in the initial planning, was the project flexible enough to include these issues as they became evident?  | Same as above  | KIIs, FGDs,<br>HHS    | None identified at this stage   |



### CROSS-FUNCTIONAL EVALUATION WORKFLOW



## HOUSEHOLD QUESTIONNAIRE

|                     |                          |       |                 |
|---------------------|--------------------------|-------|-----------------|
| HH Questionnaire ID | <WFP code/Serial Number> | Dated | ___ / 05 / 2018 |
|---------------------|--------------------------|-------|-----------------|

### Section-1: Informed Consent

Assalam o Alaikum, my name is \_\_\_\_\_ and I am working with P&DD and UNICEF Balochistan. We are conducting a survey that asks households about the water filtration plant in your area, its condition and the quality of water from that plant. Additionally we will be asking about the makeup of your household so that we can relate water demand with water availability, and water-related health problems. Your house has been selected to do an interview for our project.

We would very much appreciate your participation in this survey. This information will be used to help the Government of Balochistan and UNICEF to understand your problems and improve water-related services. The survey should take about 45 minutes to complete. The information you provide will be kept confidential and will not be shared with anyone other than members of our project team. Your responses will also be anonymous and not linked back to you in anyway.

Participation in the survey is voluntary. If we ask you any questions you don't want to answer please feel free to let me know and I will go on to the next question. You can also stop the interview at any time. We hope that you will participate in this survey, as your input is important to us. I will be happy to answer any questions you may have about the survey now. Do you have any questions?

|  |                            |                                     |
|--|----------------------------|-------------------------------------|
| May I begin the interview now? Circle one option | (1) Verbal consent granted | (2) Verbal consent declined/refused |
|--|----------------------------|-------------------------------------|

INSTRUCTIONS: If verbal consent is not granted then (a) politely thank the respondent for his/her time, (b) exit the interview and leave.

## Section-2: Profile of the Respondent and his/her Household

|                    |                |                                |
|--------------------|----------------|--------------------------------|
| Name of Respondent | Contact Number | CNIC No.<br>____ - ____ - ____ |
|--------------------|----------------|--------------------------------|

### CLASSIFY

|   |   |   |  |
|---|---|---|--|
| What is your or HoH occupation?<br>(circle one)                                     |   | Do you own this house?<br>(circle one)                                  | HH income in last 30 days                                |
| 1 = Day labourer<br>2 = Salaried worker<br>3 = Employer<br>4 = Unpaid family worker | 5 = Own-account<br>(Self-employed,<br>independent workers, etc.)                | 1 = Yes<br>2 = No, it is rented<br>3 = No, we live here free of<br>cost | PKR: _____<br><br>Portion used on medical:<br>%          |
| What is the main source of<br>drinking water  | 1 = Piped water<br>2 = Dug Well<br>3 = Spring<br>4 = Filter Plant<br>5 = Others | Do you use drinking water for<br>cooking?<br>1 = Yes<br>2 = No          | Is there a latrine in the<br>house?<br>1 = Yes<br>2 = No |

### LOCATE and CONFIRM USAGE

|  |   |
|--|---|
| Name of District   | Name of Tehsil  |
| Name of Union Council (UC)   | What is the type of UC<br>1 = Urban, 2 = Rural (circle one)                                     |
| Name of village  | Complete postal address of the household  |
| Do you use the Water Filtration Plant (WFP)?<br>1 = Yes, 2 = No (circle one) | Is the Water Filtration Plant in your area<br>1 = Functional or 2 = Not functional (circle one) |

### Section 3: Makeup of Household Members

| MID | Name of HoH member<br><NAME> | Relation-<br>ship with<br>HoH | Age<br>In years  | Sex                          | Marital<br>Status         | Highest<br>Level of<br>Edu. | Was <Name><br>ill last month?<br>(1) Yes, (2). No<br>If NO skip to<br>R9 | What was<br>cause of<br>illness | How many times<br>has <NAME> been<br>ill in the last year | Does <NAME><br>fetch drink<br>water? |
|-----|------------------------------|-------------------------------|------------------|------------------------------|---------------------------|-----------------------------|--|---------------------------------|---|--------------------------------------|
|     |                              | (see codes<br>for ans)        | Integer<br>value | (1)<br>Male<br>(2)<br>Female | (see<br>codes for<br>ans) | (see codes<br>for ans)      | (See codes<br>for ans)   | (See codes for ans)             | (1) Yes, (2) No   |                                      |
|     |                              | R1                            | R2               | R3                           | R4                        | R5                          | R6   | R7                              | R8  | R9                                   |
| 1   |                              |                               |                  |                              |                           |                             |  |                                 |   |                                      |
| R   |                              |                               |                  |                              |                           |                             |  |                                 |   |                                      |
| 2   |                              |                               |                  |                              |                           |                             |  |                                 |   |                                      |
| 3   |                              |                               |                  |                              |                           |                             |  |                                 |   |                                      |
| 4   |                              |                               |                  |                              |                           |                             |  |                                 |   |                                      |
| 5   |                              |                               |                  |                              |                           |                             |  |                                 |   |                                      |
| 6   |                              |                               |                  |                              |                           |                             |  |                                 |   |                                      |
| 8   |                              |                               |                  |                              |                           |                             |  |                                 |   |                                      |
| 9   |                              |                               |                  |                              |                           |                             |  |                                 |   |                                      |
| 10  |                              |                               |                  |                              |                           |                             |  |                                 |   |                                      |
| 11  |                              |                               |                  |                              |                           |                             |  |                                 |   |                                      |

| Codes for R1<br>Relationship to head of household  |  | Code for R5<br>Level of education  |
|--|--|--|
| 1=Head of Household<br>2=Husband<br>3=Wife<br>4=Father<br>5=Mother<br>6=Father-in-law<br>7=Mother-in-law<br>8=Stepfather<br>9=Stepmother<br>10=Brother<br>11=Sister<br>12=Brother-in-law<br>13=Sister-in-law<br>14=Son<br>15=Daughter<br>16=Son-in-Law<br>17=Daughter-in-Law | 18=Stepson<br>19=Stepdaughter<br>20=Foster-son<br>21=Foster-daughter<br>22=Uncle<br>23=Aunt<br>24=Nephew<br>25=Niece<br>26=Grandson<br>27=Granddaughter<br>28=Other relation (male)<br>29=Other relation (female)<br>30=Unrelated (male)<br>31=Unrelated (female)<br>32=Step brother<br>33=Step sister<br>34=Grandfather<br>35=Grandmother | 1 = Primary, incomplete<br>2 = Primary completed<br>3 = Technical/vocational training, incomplete<br>4 = Technical/vocational training, completed<br>5 = Middle, incomplete<br>6 = Middle, complete<br>7 =Secondary/matriculate, incomplete<br>8 = Secondary/matriculate, completed<br>9 = College/higher secondary school, incomplete<br>10 = College/higher secondary school, degree<br>11 = Technical college, incomplete<br>12 = Technical college, degree<br>13 = University, no degree / left before completion<br>14 = University, Bachelor<br>15 = University, Master<br>16 = PhD, Postgraduate degree<br>18 = Hafiz<br>19 = Enrolled for religious education<br>17 = Never Enrolled / went to school<br>99 = Don't know |
| Codes for R4<br>Marital status   | Codes for R7<br>Cause of illness   | Codes for R8<br>Frequency of illness   |
| 1 = Married<br><br>2 = Divorced, separated<br><br>3 = Widowed<br>4 = Never married   | 1 = Diarrhoea<br>2 = Typhoid Fever<br>3 = Cholera<br>4 = Malaria<br>5 = Filariasis<br>6 = Hepatitis<br>7 = Polio<br>8 = Gastroenteritis<br>9 = Amoebiasis<br>10 = Giardiasis<br>97 = Other   | 1 = Once a month<br>2 = Several times in last year<br>3 = Occasionally over the year<br>99 = Don't know  |



| Q15   | Do you Know the source of water used in WFP<br>1. Yes 2. No  |   |   |        |        |   |   |   |   |  |
|---|--|---|---|--------|--------|---|---|---|---|--|
| Q16   | If in Q—please named the sources<br>1. Government Supply 2.Tubewll 3.Water tank 4.Other (Please specify)   | Skip If No in Q15   |   |        |        |   |   |   |   |  |
| Q17   | Generally, how does the water smell?<br>1. No smell 2.Foul smell   |   |   |        |        |   |   |   |   |  |
| Q18   | Generally, does the water have a taste?<br>1. Yes 2.No (tasteless)   |   |   |        |        |   |   |   |   |  |
| Q19   | Generally, what does the water look like?<br>1. Clear 2.Cloudy/ dirty  |   |   |        |        |   |   |   |   |  |
| Q20   | Is water at WFP available throughout the year?<br>1. Yes 2. No   |   |   |        |        |   |   |   |   |  |
| Q21   | Has the plant broken down in the past one year?<br>1. Yes 2. No  |   |   |        |        |   |   |   |   |  |
| Q22   | How frequently has the plant broken down during the past one year?<br>1. Once a week 2. Once a fortnight 3. Once a quarter<br>4. Once in six months 4. Once a year 5. Ever   | Skip If No in Q21   |   |        |        |   |   |   |   |  |
| Q23   | Have you ever made a complaint related to WFP in your area?<br>1. Last 30day 2.Last 180days/6months 3. Last Year<br>4.Ever 5. No   |   |   |        |        |   |   |   |   |  |
| Q24   | To whom did you complain?<br>1. Plant operator 2. PHED 3.P&DD 4. Councillor<br>5. Influential 6. DCO 7. Others (Please Specify)  |   |   |        |        |   |   |   |   |  |
| Q25   | What was the result of the complaint?<br>1. Prompt action taken 2. Delayed action taken 3.No action taken  |   |   |        |        |   |   |   |   |  |
| Q26   | In case WFP not working properly, what is the source of drinking water?<br><table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; color: red;">Piped Water</th> <th style="text-align: center; color: red;">Dug Well</th> <th style="text-align: center; color: red;">Spring</th> <th style="text-align: center; color: red;">Others</th> </tr> </thead> <tbody> <tr> <td>1 = Piped into home<br/>2 = Piped to yard/plot<br/>3 = Piped to neighbour<br/>4 = Tube Well / Borehole</td> <td>5 =Protected Well<br/>6 = Unprotected Well</td> <td>7 = Protected Spring<br/>8 = Unprotected Spring<br/>9 = Rainwater<br/>10 = Surface Water (River, Dam, Lake, Pond, stream, Canal, Irrigation Channel)</td> <td>11=Filtration Plant<br/>12=Tanker-Truck<br/>13=Cart with Small Tank<br/>14=Water Kiosk<br/>15=Bottled Water<br/>16=Other</td> </tr> </tbody> </table> | Piped Water   | Dug Well  | Spring | Others | 1 = Piped into home<br>2 = Piped to yard/plot<br>3 = Piped to neighbour<br>4 = Tube Well / Borehole | 5 =Protected Well<br>6 = Unprotected Well | 7 = Protected Spring<br>8 = Unprotected Spring<br>9 = Rainwater<br>10 = Surface Water (River, Dam, Lake, Pond, stream, Canal, Irrigation Channel) | 11=Filtration Plant<br>12=Tanker-Truck<br>13=Cart with Small Tank<br>14=Water Kiosk<br>15=Bottled Water<br>16=Other |  |
| Piped Water   | Dug Well   | Spring  | Others  |        |        |   |   |   |   |  |
| 1 = Piped into home<br>2 = Piped to yard/plot<br>3 = Piped to neighbour<br>4 = Tube Well / Borehole | 5 =Protected Well<br>6 = Unprotected Well  | 7 = Protected Spring<br>8 = Unprotected Spring<br>9 = Rainwater<br>10 = Surface Water (River, Dam, Lake, Pond, stream, Canal, Irrigation Channel) | 11=Filtration Plant<br>12=Tanker-Truck<br>13=Cart with Small Tank<br>14=Water Kiosk<br>15=Bottled Water<br>16=Other |        |        |   |   |   |   |  |
| Q27   | Do you normally pay for water used by your household?<br>1. Yes 2. No  |   |   |        |        |   |   |   |   |  |
| Q28   | How much do you normally pay for drinking water<br>RS _____  |   |   |        |        |   |   |   |   |  |
| Q29   | Are you willing to pay for an improved water supply system?<br>1. Yes 2. No  |   |   |        |        |   |   |   |   |  |

Result of Interview                      1. Complete      2.Incomplete  
Write down reason in case of incomplete or Refused

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|                       |  |                        |  |
|-----------------------|--|------------------------|--|
| Surveyor Name:        |  | Supervisor Name:       |  |
| Surveyor Code:        |  | Supervisor Code:       |  |
| QC Back Checker Name: |  | QC Back Checking Date: |  |
| Coded By:             |  | Entered By:            |  |



## KEY INFORMANT INTERVIEW (KII)

### Informed Consent

Assalam o Alaikum, my name is \_\_\_\_\_ and I am working with P&DD and UNICEF Balochistan. We are conducting an evaluation that asks about the water filtration plant in your area, its condition and the quality of water from that plant. You have been identified as a Key Informant for the evaluation.

We would very much appreciate your participation in this process. This information will be used to help the Government of Balochistan and UNICEF to understand your problems and improve water-related services. The interview should take about 45 minutes to an hour to complete. All information will be consolidated and presented in an evaluation report. Therefore the information you provide will be kept confidential and will not be shared with anyone other than members of our evaluation team. Your responses will also be anonymous and not linked back to you in anyway.

Participation in the KII is voluntary. If we ask you any questions you don't want to answer please feel free to let me know and I will go on to the next question. You can also stop the interview at any time. We hope that you will participate in this survey, as your input is important to us. I will be happy to answer any questions you may have about the survey now. Do you have any questions?

|                    |                   |
|--------------------|-------------------|
| Name of Respondent |                   |
| Designation        | Department        |
| District           | Date of Interview |

### P&DD /PHED

1. In your opinion is the CDWA a programme of GoB or a project?
2. Has the GoB internalized the CDWA into the ADP?
3. Have appropriate budgetary measures been taken to ensure continuous operations?
4. Do you think the money allocated in the ADP / Establishment Costs etc. appropriate to keep all plants properly operational?
5. How will you (PHED) ensure that the non-functional plants are restored to full operational status?
6. How do you monitor the operation and functionality status of the WFPs?
7. How often have you carried out water sampling since the plants were installed? If yes, has there been a change in the water quality since the plants were installed?
8. What do think should be done to keep all plants operational?

9. How often do you coordinate with the district administration, health departments and local government on the operations or problems related to drinking water and the WFP? If not, why not?
10. What measures have been programmed to protect the WFPs during disasters? What recovery measures since are programmed, particularly since Balochistan prone to natural disasters such as earthquakes, floods and drought.

## Public Health and Local Government

1. Are you aware of what the situation was like before the installation of a Water Filtration Plant (WFP) in the area?
  - a. There was access to safe drink water
  - b. There was a prevalence of waterborne diseases in the area
  - c. There were government water supply schemes
  - d. There were community-level initiatives to improve provision of safe drinking water
  - e. There were District government and other organization's programmes for drinking water.
2. Existing WFPs are able to meet the needs of 100% of the population? Please explain why you agree or disagree with this statement.
3. Were you involved in WFP location selection? If yes, please explain elaborate on the criteria used for selection.
4. Was the WFP installation on a need basis?
5. Are you aware of any filtration processes? Were there any awareness campaigns advocating the use of filtered water?
6. How can the Government improve the WFP function as well as usage of filtered water?
7. Please describe / elaborate on the following points:
  - a. Local community beliefs about water obtained from WFPs;
  - b. Quality of filtered water from WFPs;
  - c. Functionality of WFPs;
  - d. Non – functionality of WFPs;
  - e. Maintenance mechanisms for WFPs;
  - f. Barriers to WFP maintenance;
  - g. Tangible benefits derived from this programme;
  - h. The extent to which this programme has served the real needs of beneficiary communities;
  - i. Local government or department measures to ensure continues supply of filtered water to the community;
  - j. Barriers to smooth operations of WFPs;
  - k. Level of coordination and integration between local government, PHED, P&DD, Health, and other (please specify) relevant departments.
8. Do you think that the WFP solution is sustainable? If no, why not? If yes, what makes it sustainable?
9. Is there any formal complaint management system for the WFP programme?

10. In your opinion, what are the major reasons for both performance and non-performance of WFPs?
11. Do you have any suggestions and / or recommendations related to the following points?
  - a. WFP operation
  - b. Filtered water usage improvement
  - c. Complaint resolution and the time it takes
  - d. Other
12. What measures have been programmed to protecting the WFPs during disasters? What recovery measures since are programmed, particularly since Balochistan prone to natural disasters such as earthquakes, floods and drought.

## UNICEF Balochistan

Open discussion on all of the above questions

Plus additional aspects related to the country policy, SDGs and WASH related programming that incorporates or focuses on the supply of clean drinking water.

Interviewer Name \_\_\_\_\_ Date \_\_\_\_\_

## FOCUS GROUP DISCUSSIONS (FGDS)

### Informed Consent

Assalam o Alaikum, my name is \_\_\_\_\_ and I am working with P&DD and UNICEF Balochistan. We are conducting an evaluation that asks households about the water filtration plant in your area, its condition and the quality of water from that plant, and any issues you all would like to talk about with respect to that.

We would very much appreciate your participation in this process. This information will be used to help the Government of Balochistan and UNICEF to understand your problems and improve water-related services. The FGD should take about 45 minutes to an hour to complete. All information will be consolidated and presented in an evaluation report. Therefore the information you provide will be kept confidential and will not be shared with anyone other than members of our evaluation team. Your responses will also be anonymous and not linked back to you in anyway

Participation in the FGD is voluntary. If we ask you any questions you don't want to answer please feel free to let me know and I will go on to the next question. You can also stop the interview at any time. We hope that you will participate in this discussion, as your input is important to us. I will be happy to answer any questions you may have about the survey now. Do you have any questions?

### FGD Questions

1. What are the general health conditions of the people in your community?
2. How many people in your community are sick, or get sick from drinking poor quality water?
3. Are there other reasons you think cause illness in your area?
4. What is your opinion about water availability in your area?
5. Do you all use the WFP installed in your area?
6. Does the plant work satisfactorily?
7. Does it provide drinking water? If so, is it always available?
8. How many people do you think get water from this WFP?
9. Are you all satisfied with the water provided through the WFP?
10. Do you think this plant provides water to meet the complete drinking water needs of the people in your community?
11. Is there any other matter related to the WFP that you all would wish us to know about?

## FGD Quality Assurance Protocols

The Quality Assurance (QA) mechanisms and protocols (defined below) for all proposed steps will be enforced and implemented by the QA team.

REMEMBER TO ASK FOR PERMISSION TO TAKE A GROUP PICTURE OF THE FGD PARTICIPANTS OR DURING THE FGD PROCESS

### Screening and Recruitment

- Consent from FGD participant will be obtained by the Field Supervisor at the start of the during recruitment phase;
- Since this is a fast-track evaluation survey the date, time and venue of FGD cannot be communicated well in advance. Therefore select participants during the HHS process. Seek guidance from the supervisor if unclear, and;
- Arrange sufficient refreshments for the participants; use locally available and acceptable refreshments such as biscuits, juice, and tea.

### FGD Moderator and Note-Taker Training

#### Moderator

- Be aware of psychology and behaviour of urban and rural communities;
- Should exercise mild unobtrusive control;
- Should have adequate knowledge of the topic;
- Must maintain discipline in listening;
- Should be familiar with questioning route;
- Should use purposeful small talk;
- Must observe the participants for seating arrangements, culturally suitable;
- Must use pauses and probes as and when necessary;
- Must control reactions towards participants i.e. both verbal and nonverbal communication;
- Should verify information gathered and identify missing elements.

#### Observer/Note-Taker

- Should coordinate with both moderator and the report writer;
- Should handle all necessary logistics (exercise and discussion material);
- Should facilitate participants and their parents;
- Should operate and monitor any equipment to ensure proper function;
- Should provide an oral summary to the moderator and report writer of FGD proceedings;
- Should debrief the moderator and report writer;
- Should provide the any audio recording to the moderator and report writer.

#### Guidelines for Conduct of the FGD

- Provide a proper and carefully conducted introduction session for all participants
- The introductory process must clearly state, in simple language, all the following aspects of the FGD:
  - Introduce yourself
  - Inform participants of how the information collected from the FGD will be used in the analysis of the operations and benefits of the Programme; Reconfirm their understanding of your role;
  - Explain to them the meaning of 'consent', and ensure their understanding; repeat until all present clearly understand that their permission is necessary for you to proceed further; record the consent;

- Inform them that participation entirely voluntary; Clarify that parents / guardians can freely withdraw their child, or that the child can opt to remove him/herself from the session, at any time and without giving any reason; Reiterate that doing so will not be held against them in any way;
- Explain that the children ARE NOT part of the evaluation exercise but they can ask questions;
- Emphasize that the information collected through the conversation is strictly confidential, and, that personal or sensitive information will NOT be shared with anyone;  
1
- Then summarize what information you will ask for or the topics you will cover, and the total time the activity will take.
- Prepare Rapport Building Exercises;
- Enlist questions related to viewing;
- Communicate the prepared discussion protocols to each participant;
- Required materials for the FGDs should be prepared and on-hand before the start of the discussion;
- Collection of non-verbal information along with participant identifier.

### **FGD Transcription and Reporting**

- Note-Taker should conduct debriefing session with the moderator and report writer immediately after the FGD. Debriefing should include:
  - Log any additional information obtained about the FGD;
  - Discuss issues or comments that need clarification;
  - Discuss particular questions that did not work well;
  - Discuss any information that contradicts or confirms data collected in previous sessions;
  - Discuss new topics that may arise during the FGD, and;
  - Discuss points that came up during the FGD which caused distress for the participants.
- Should prepare a FGD Summary Report using debriefing notes and any recording;
- Should prepare a verbatim transcription for each FGD.

## WATER FILTRATION PLANT STATUS DATA COLLECTION

|                     |                          |       |                 |
|---------------------|--------------------------|-------|-----------------|
| HH Questionnaire ID | <WFP code/Serial Number> | Dated | ___ / 05 / 2018 |
|---------------------|--------------------------|-------|-----------------|

### Administration Plot

|            |        |       |         |   |          |
|------------|--------|-------|---------|---|----------|
| District   | Tehsil | Union | Council | / | Location |
| Plant Name |        |       |         |   |          |

Confirmed

Edited  Confirmed

### Water Filtration Plant Configuration

|               |                                      |                                       |                                       |  |   |
|---------------|--------------------------------------|---------------------------------------|---------------------------------------|--|---|
| Type of Plant | <b>X</b><br><input type="checkbox"/> | <b>X2</b><br><input type="checkbox"/> | <b>X3</b><br><input type="checkbox"/> | <b>X4: Y</b><br><input type="checkbox"/> | <b>Other</b><br><input type="checkbox"/><br><small>(if yes, please specify)</small> |
|---------------|--------------------------------------|---------------------------------------|---------------------------------------|--|---|

### Status and Surroundings

|                 |                                     |  |
|-----------------|-------------------------------------|--|
| Physical Status | Functional <input type="checkbox"/> | Non-Functional<br><input type="checkbox"/> |
|-----------------|-------------------------------------|--|

### Source of water

|           |       |  |
|-----------|-------|--|
| Plant Age | Years | Don't Know<br><input type="checkbox"/> |
|-----------|-------|--|

|                |   |   |
|----------------|---|---|
| Infrastructure | <b>Type:</b><br>Plastic, Steel,<br>concrete etc. or<br>others | <b>Status:</b><br>Good Condition<br><input type="checkbox"/><br>Damaged<br><input type="checkbox"/> |
|----------------|---|---|

|                  |                        |        |           |
|------------------|------------------------|--------|-----------|
| Surrounding Area | Dwellings              | Market | Open area |
|                  | Other, please describe |        |           |

**Nearest Available Facilities for R&M**

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### Operator's Specs

**Name**

---

**Qualification**

---

**Job Description**

---

**Job Duration<sup>20</sup>**

---

**Contact Details**

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20 In case of multiple shifts, please indicate duration of each shift.

**Reviewers Assessment**

Tick that which is applicable

1. The operator was present at the time of review
2. He was aware of plant operations and could answer all questions
3. The WFP was found operational and all parts were operating normally
4. There were no leakages of any kind
5. The plant area was clean and clear
6. People who came there could easily access the plant
7. People who came there for water brought (a) jerry cans, (b) drums, (c) other containers to fill water
8. People were generally (a) satisfied with the water quality, (b) not satisfied with the water quality
9. People generally (a) did not have any complaints (b) had complaints

Any other comment or observation

**Signature, date and time**



## DATA QUALITY ASSURANCE GUIDELINES

At the survey design stage, the prime objective of data quality assurance will be to gather intended information consistently using the survey instruments. We believe that data quality is affected by many factors, i.e. measurement errors, transcription errors, unrepresentative sampling, and survey instrument understanding, a short description and mitigation strategy of each factor is given below.

**Measurement Error:** As part of the Quality Assurance Mechanism, all measurement errors will be minimized through concept building exercise, mock exercise, data collection guidelines and accompanied interviews.

**Transcription Error:** Transcription error will be minimized using data validation checklists. The Enumerators will validate the collected information before handing that over to the Field Supervisors (FS). The FS will again review all questionnaires before dispatching them to the centralized Data Entry Hub. Any discrepancy found in the filled instruments will be adjusted using logic, predefined guidelines, enumerators' knowledge or respondents will be contacted via phone or revisited for collection of missing information.

**Unrepresentative Sampling:** To avoid this error, sample will be selected as per MSI approved sampling technique. Field supervisors and field monitoring teams will ensure that data will be collected as per the approved sampling plan.

**Survey Questionnaire:** Survey questionnaire will be validated during mock exercise, and one day will be reserved for survey instrument validation. To ensure data quality, detailed guidelines have been developed by the consultants.

Following are the main guidelines for the data collection, the enumerator/surveyor must follow on the field:

The surveyor will be provided with a list of the water filtration plants (WFPs) for the survey. Before interview, the surveyor must ensure that he has all the tools necessary for the interview like, pen, , stapler, questionnaires, (some extra copies in case of missing or damaged questionnaire) and letter of authorization / NOC from P&DD/UNICEF.

### General Instructions

- The form must be filled by the enumerator himself/herself;
- A pen/pencil having permanent ink impression must be used;
- Each box must contain only one letter;
- Letter must not exceed the given space of a box;
- Use only capital letters;
- Each word should be separated by “-“in a box, and;
- Each round circle must be completely filled. Only marked or half-filled will not be considered.

## Effective Interviewing Tips

### Do's

- Listen more than you speak;
- Create a friendly environment;
- Keep a reasonable voice pitch that you can be heard and understood clearly;
- Ask questions in a straightforward, clear and non-threatening way;
- Use simple and short sentences to avoid any confusion;
- Ask the questions in native language to get proper responses from the respondents;
- Make sure that you understand respondents' response;
- Repeat or rephrase the question if the respondent is unable to understand the question;
- Listen carefully to the answers and request clarification if necessary;
- Allow the interviewee to ask questions;
- Keep control of the interview: refocus the interviewee if they are rambling or clarify if they misunderstood the question, and;
- Stay focused and follow your interview guide.

### Don'ts

- Don't ask questions containing words likely to be unfamiliar to the target audience;
- Keep things simple to avoid disturbing interviewees; it is in your own interest as well;
- Don't give cues which lead interviewees to respond in a particular way;
- Don't impose own structures and assumptions;
- DO NOT give your opinion about the response of any question even if it is requested by the respondent;
  - **Remember!** You are there to only obtain information from the respondent.
- Don't make criticisms or take sides.

### Ethical Principles

- Respect for human dignity;
- Respect for free and informed consent;
- Respect for vulnerable persons;
- Respect for privacy and confidentiality, and;
- Respect for justice and inclusiveness.

### Human Dignity

#### Basis of ethical obligations

- Interact with your respondents in local manners of respect and dignity;
- DO NOT Show off;
- Do not create any situation of disrespect of your respondent/locals;
- Greet with a smile but it must look like "Respectful smile", and;
- Use terms like *aap* in Urdu, *tusan* in Saraiki and Sindhi, *tusi* in Punjabi, and *taso* in Pashto. DO NOT use terms like *tum*, *tu* etc. Ask your supervisor / trainer for appropriate terms in Balochi and Brohvi.

## DATA VALIDATION CHECKLIST

| S# | Check  | Action  |
|----|--|---|
| 1  | R1: Relationship with Head of Household is Spouse  | R4: Marital Status<br>Not Equal to:<br>2= Divorced, separated<br>3 = Widowed<br>4 = Never married   |
| 2  | R5: Highest Level of Edu.(Years of Schooling)  | <b>R2:Age</b> >= Highest Level of Edu.(Years of Schooling) + 5 ) - Valid<br><br>R2:Age <b>Note less than</b> (Highest Level of Edu.(Years of Schooling) + 5 ) - Invalid |
| 3  | Conditional Skip<br><br>R6 equal No=2  | <b>R7 Skipped</b>   |
| 4  | Conditional Fill<br><b>Q3</b> equals In own dwelling=1   | <b>Q4 equals Zero</b><br><b>Q4 = 0</b>  |
| 5  | Conditional Skip<br><br>Q10 equal No=2   | <b>Q11 Skipped</b>  |
| 6  | Conditional Skip<br><br><b>Q15</b> equal No=2  | <b>Q16 Skipped</b>  |
| 7  | Conditional Skip<br><br><b>Q21</b> equal No=2  | <b>Q22 Skipped</b>  |
| 8  | Check<br>Q17 equal Foul smell =2<br>OR<br>Q18 equal No (tasteless) =2<br>OR<br>Q19 equal Cloudy/ dirty = 2<br>OR<br>Q20 equal NO = 2<br>OR<br>Q21 equal NO = 2 | <b>Then Q23 could be Codes</b><br>1. Last 30 day<br>2. Last 180 days/6months<br>3. Last Year<br>4.Ever  |

## QUALITY ASSURANCE SPOT CHECK CHECKLIST

Name of Enumerator \_\_\_\_\_

District \_\_\_\_\_

Tehsil \_\_\_\_\_

Quality Assurance Coordinator \_\_\_\_\_

Date of Visit \_\_\_\_\_

Protocols are used to improve data quality

|      |   |             |
|------|---|-------------|
| Q.1  | Standard procedure is used for sample selection   | 1. Yes 2.No |
| Q.2  | Standard introduction is given to respondent  | 1. Yes 2.No |
| Q.3  | Administered informed consent to start interview;   | 1. Yes 2.No |
| Q.4  | Allow the interviewee to ask questions;   | 1. Yes 2.No |
| Q.5  | Greet with Respectful smile;  | 1. Yes 2.No |
| Q.6  | Create a friendly environment;  | 1. Yes 2.No |
| Q.7  | Keep a reasonable voice pitch that you can be heard and understood clearly;   | 1. Yes 2.No |
| Q.8  | Ask questions in a straightforward, clear and non-threatening way;  | 1. Yes 2.No |
| Q.9  | Use simple and short sentences to avoid any confusion;  | 1. Yes 2.No |
| Q.10 | Ask the questions in native language to get proper responses from the respondents;  | 1. Yes 2.No |
| Q.11 | Make sure that you understand respondents' response;  | 1. Yes 2.No |
| Q.12 | Repeat or rephrase the question if the respondent is unable to understand the question;   | 1. Yes 2.No |
| Q.13 | Listen carefully to the answers and request clarification if necessary;   | 1. Yes 2.No |
| Q.14 | Creating any situation of disrespect of your respondent/locals;   | 1. Yes 2.No |
| Q.15 | Listening more than you speaking  | 1. Yes 2.No |
| Q.16 | Giving cues which lead interviewees to respond in a particular way;   | 1. Yes 2.No |
| Q.17 | Keep control of the interview: refocus the interviewee if they are rambling or clarify if they misunderstood the question, and; | 1. Yes 2.No |
| Q.18 | Imposing own structures and assumptions;  | 1. Yes 2.No |
| Q.19 | Stayed focused and follow your interview guide.   | 1. Yes 2.No |

## TRAINING PLAN FOR OFFICIALS OF THE GOB AND FIELD SUPERVISORS

April 29 - May 01, 2018

### Day 1

| Activity           | Time          | Content  | Strategy                          | Responsibility                                   |
|--------------------|---------------|--|-----------------------------------|--|
| Session – 1        | 10:00 – 10:10 | <ul style="list-style-type: none"> <li>Tilawat Quran Pak</li> </ul>  | Volunteer                         | Volunteer  |
|                    | 10:10 – 10:30 | <ul style="list-style-type: none"> <li>Participants Introduction</li> </ul>  | In-person                         | Master Trainer                                   |
|                    | 10:30 – 11:00 | <ul style="list-style-type: none"> <li>Project Introduction</li> </ul>   | Presentation                      | Master Trainer                                   |
| Session – 2        | 10:00 – 11:00 | <ul style="list-style-type: none"> <li>Effective Data Collection Techniques</li> <li>Research Ethics</li> </ul>  | Interactive session with Handouts | Master Trainer                                   |
| 11:00 – 11:15      |               | Tea Break  |                                   |  |
| Session – 3        | 11:15 – 12:30 | <ul style="list-style-type: none"> <li>How to Improve Community Acceptance &amp; Involvement</li> <li>Invalid Response Handling</li> <li>Transcription Error &amp; Sampling Error</li> <li>Non-Response Minimization</li> </ul>  | Interactive session with Handouts | Master Trainer                                   |
| Group Exercise – 1 | 12:30 – 01:30 | <p><b>Concept Application</b></p> <ul style="list-style-type: none"> <li>Do's &amp; Don'ts while conducting survey (Local Context)</li> <li>List Issues may occurred in day start and day end activities with possible solution</li> </ul>                                   | Group Exercise                    | Master Trainer<br>Co-Trainer<br>Field Supervisor |
| 01:30 – 02:30      |               | Nimaz & Lunch Break  |                                   |  |
| Session – 4        | 02:30 – 04:00 | <ul style="list-style-type: none"> <li>Discussion on Household Questionnaire <ul style="list-style-type: none"> <li>Question Context &amp; Objective</li> </ul> </li> <li>Field editing to ensure completeness &amp; consistency</li> </ul>                                  | Interactive session with Handouts | Master Trainer<br>Co-Trainer                     |
| 04:00 – 04:15      |               | Tea Break  |                                   |  |
| Group Exercise – 2 | 04:15 – 05:00 | <p><b>Independent Concept Application</b></p> <p>4:15 to 4:25 Group Discussion</p> <p>4:25 to 5:00 With in Group Presentation</p> <ul style="list-style-type: none"> <li>Role play Enumerator - Respondent</li> <li>Field Editing</li> <li>Questionnaire Dispatch</li> </ul> | Group Exercise                    | Master Trainer<br>Co-Trainer<br>Field Supervisor |

## Day-2

| <u>Activity</u>      | <u>Time</u>   | <u>Content</u>   | <u>Strategy</u>                   | <u>Responsibility</u>                            |
|----------------------|---------------|--|-----------------------------------|--|
| Session – 5          | 10:00– 11:00  | <ul style="list-style-type: none"> <li>• FGD participant recruitment &amp; selection</li> <li>• FGD quality assurance</li> <li>• Rapport Building for effective FGD</li> </ul>             | Interactive session with Handouts | Master Trainer<br>Co-Trainer                     |
| <b>11:00– 11:15</b>  |               | <b>Tea Break</b>   |                                   |  |
| Session - 6          | 11:15 – 12:00 | <ul style="list-style-type: none"> <li>• Discussion on FGD guidelines <ul style="list-style-type: none"> <li>○ Concept and Context of each discussion point</li> </ul> </li> </ul>         | Interactive session with Handouts | Master Trainer<br>Co-Trainer                     |
| Group Exercise – 3   | 12:00 – 01:00 | <p><b>Concept Application</b></p> <ul style="list-style-type: none"> <li>• Role play - Managing focus discussion</li> </ul>  | Group Exercise                    | Master Trainer<br>Co-Trainer<br>Field Supervisor |
| <b>01:00 – 02:00</b> |               | <b>Nimaz &amp; Lunch Break</b>   |                                   |  |
| Session – 7          | 02:00 – 03:45 | <ul style="list-style-type: none"> <li>• Discussion on KIIs guidelines <ul style="list-style-type: none"> <li>○ Concept and Context of each discussion point</li> </ul> </li> </ul>        | Interactive session with Handouts | Master Trainer<br>Co-Trainer                     |
| <b>03:45 – 04:00</b> |               | <b>Tea Break</b>   |                                   |  |
| Session – 8          | 04:00 – 05:00 | <ul style="list-style-type: none"> <li>• Role play - KIIs Interview with officials from <ul style="list-style-type: none"> <li>○ Health</li> <li>○ Local Government</li> </ul> </li> </ul> | Interactive session with Handouts | Master Trainer<br>Co-Trainer<br>Field Supervisor |

## Day 3

| <b>Activity</b>      | <b>Time</b>   | <b>Content</b>   | <b>Strategy</b>                   | <b>Responsibility</b>                       |
|----------------------|---------------|--|-----------------------------------|---|
| Session – 9          | 10:00– 12:00  | <ul style="list-style-type: none"> <li>• Field Mock for               <ul style="list-style-type: none"> <li>○ Household</li> <li>○ FGD</li> <li>○ KIIS</li> </ul> </li> </ul> | Interactive session with Handouts | Master Trainer<br>Co-Trainer                |
| Session – 10         | 12:00– 2:00   | Fieldwork observation assessment & accumulation  | Interactive session with Handouts | Master Trainer<br>Co-Trainer                |
| <b>02:00 – 03:00</b> |               | <b>Lunch Break</b>   |                                   |   |
| Session – 11         | 03:00 - 04:00 | Participant feedback on filed work   | Interactive session with Handouts | Master Trainer<br>Co-Trainer                |
| Session – 12         | 04:00 - 05:00 | Fieldwork Plan Finalization  | Interactive session               | Field Operations team & district supervisor |

## PRE AND POST TEST FOR THE FIELD TEAM

|                        |  |
|------------------------|--|
| Name of Field Staff    |  |
| Cell number and e-mail |  |

| S# | Question  | Response Pre-Test                           | Response Post Test                         |
|----|---|---|--|
| 1  | Capacity-building is the process of developing skills, abilities, processes and resources needed to survive and adapt.  | Y / N                                       | Y / N                                      |
| 2  | An evaluation is an assessment. It allows you to make a judgement about something.  | Y / N                                       | Y / N                                      |
| 3  | Indicators only allow us to forecast future trends. They do not measure current conditions  | Y / N                                       | Y / N                                      |
| 4  | An example of an indicator at a water filtration plant could be "the plant operates smoothly and people have accesses to water from the plant, without any hindrance"                               | Y / N                                       | Y / N                                      |
| 5  | Data collection is the act of gathering many different types of information in an unsystematic way.   | Y / N                                       | Y / N                                      |
| 6  | Access to safe water is measured by the proportion of population with access to an adequate amount of safe drinking water located within a convenient distance from the user's dwelling             | Y / N                                       | Y / N                                      |
| 7  | What do these terms mean?   |   |  |
| A  | Water treatment refers to the chemical and physical processes used to clean water for drinking purposes   | Y / N                                       | Y / N                                      |
| B  | Clean drinking water relates to the availability of water for human consumption, free of all kinds of contamination   | Y / N                                       | Y / N                                      |
| C  | Population density refers to the number of people living per square kilometre   | Y / N                                       | Y / N                                      |
| D  | WASH means Water, Health, Sanitation & Hunger   | Y / N                                       | Y / N                                      |
| E  | Completeness is (a) a condition of having all the necessary and appropriate parts, (b) a condition of having finished the main task, even if some components are missing                            | Choose one or more that are correct.<br>A B | Choose one or more that are correct<br>A B |
| F  | Coordination is (a) the organization of the different elements to enable them to work together effectively , (b) the organization of the different elements that work separately on unrelated tasks | Choose one or more that are correct.<br>A B | Choose one or more that are correct<br>A B |
| 8  | Fieldwork is different from field research.   | Y / N                                       | Y / N                                      |
| 9  | Consent is unnecessary before asking questions to communities, people.  | Y / N                                       | Y / N                                      |
| 10 | To probe is to explore or examine something to derive information.  | Y / N                                       | Y / N                                      |



| S# | Question   | Response Pre-Test                               | Response Post Test                              |
|----|--|---|---|
| 11 | Community support focuses only on parent groups. It is not concerned with institutions.  | Y / N   | Y / N   |
| 12 | Committees contribute to interventions by (a) actively participating in all development work, or (b) opposing and questioning all development work.  | Choose one or more that are correct.<br>A B     | Choose one or more that are correct.<br>A B     |
| 13 | Examples of WASH interventions are (a) providing toilets with running water, (b) teaching children to conserve water, (c) teaching children to wash their hands before eating  | Choose one or more that are correct.<br>A B C   | Choose one or more that are correct.<br>A B C   |
| 14 | Do you know what P&DD, PHED mean?  | Y / N   | Y / N   |
| 15 | Do you know which department of the government is responsible for the supply of clean drinking water to the people?  | Y / N   | Y / N   |
| 16 | Do you know of UNICEF  | Y / N   | Y / N   |
| 17 | (a) UNICEF addresses the needs of all children in the Quetta. (b) UNICEF never gets involved in WASH activities. (c) UNICEF works with the government to respond to the needs of the girl child. (d) UNICEF collaborates with the government and other development partners to implement programmes. | Choose one or more that are correct.<br>A B C D | Choose one or more that are correct.<br>A B C D |
| 18 | Have you ever been involved in primary data collection in the field?   | Y / N   | Y / N   |
| 19 | Qualitative data is non-numerical information that is structured.  | Y / N   | Y / N   |
| 20 | Quantitative data is numerical in nature and well-structured.  | Y / N   | Y / N   |
| 21 | Qualitative data collection requires (a) attentively listening to the respondent, (b) recording detailed notes, (c) ensuring that everything about the Quetta should be read, (d) keenly observing the surroundings.   | Choose one or more that are correct.<br>A B C D | Choose one or more that are correct.<br>A B C D |
| 22 | FGD means Focus Group Data   | Y / N   | Y / N   |
| 23 | (a) FGDs are conducted as informal meetings that have no set plan of action. (b) Meals are not provided during FGDs (c) Meals are provided during FGDs.  | Choose one or more that are correct.<br>A B C   | Choose one or more that are correct.<br>A B C   |
| 24 | Key Informant Interviews are meant to gain an understanding of the topic from important stakeholders.  | Y / N   | Y / N   |
| 25 | To be prepared for a KII one must (a) inform those being interviewed, (b) explain the nature of the meeting in advance, (c) provide refreshments during the meeting, (d) record information both audial and on paper.  | Choose one or more that are correct.<br>A B C D | Choose one or more that are correct.<br>A B C D |
| 26 | A checklist is a rough set of guidelines.  | Y / N   | Y / N   |
| 27 | Observation means using your eyes and ears to keenly note major aspects of a situation.  | Y / N   | Y / N   |

## LIST OF REFERENCE MATERIAL REVIEWED AND FURTHER REQUIRED

The document listed below have been consulted in the preparation of this inception report:

1. PC-1, Clean Drinking Water for All Project (Balochistan Component),
2. DTU List Balochistan, undated
3. Table: Current Status of All 409 Filtration Plants installed under CDWA Project as per Report of Executive Engineers PHED
4. Request for proposal for services LRPS-2017-9132217, 2017
5. Third Party Validation BISA, Presentation, 2013
6. Brief on Public Health Engineering Department, Presentation, 2014-18
7. Multiple Indicator Cluster Survey Balochistan, UNICEF, 2010
8. Pakistan Social Living Measurement Survey (PSLM) 2014-15
9. Pakistan Census 2017, Provincial Province Wise Population District level
10. Brief on Mega Projects of Public Health Engineering Department, Government of Balochistan
11. Water Sustainability in Pakistan – Key Issues and Challenges, Chapter 7, State Bank of Pakistan Annual Report 2016-17
12. Pakistan’s Water Challenges: A Human Development Perspective, Working Paper Series 105, 2006
13. Province Wise Provincial Results of Census, 2017
14. Climate Change Action Plan, World Bank Group, 2016-20
15. Mainstreaming Climate Change in National Development Processes and UN Country Programming, UNDP, 2012

The following list of documents are requested from P&DD, PHED and the current CDWA Project Management:

1. Current list of available water resources by type of resource tehsil/district wise
2. Verification of the 409 list of installed water purification/filter plants / RO Plants by capacity and by Union Council
3. Current list of staff responsible for plants operation & maintenance by WFP Site
4. Past two years HR retention and Strengthening Plan
5. Organization Structure (Project related)
6. Health data of disease(s) caused by contaminated water tehsil/district wise
7. Pakistan Standards Institute (PSI) standards for clean drinking water (Annexure-D, PC-1)
8. Latest clean drinking water contamination data of Balochistan by district and tehsil
9. WASH policy of Government of Balochistan
10. Last three years workplans of the Project
11. Approved Annual Plan(s)
12. Financial Plan of the Project
13. Costs breakup of each plant by capacity and type of plant
14. CDWA project management reporting and M&E organogram
15. Criteria for pre-qualification of contracts by type of activity/work
16. Strategy for Institutional Networking/coordination at National and Provincial level
17. Roles and responsibilities of various project-related committees at District/Provincial and National level
18. Policy guidelines for project implementation
19. Standard Operating Procedures (SOPs) for various project-related tasks
20. Approved adoption of the “Plan of action on safe drinking water - 2005 ”
21. Approved adoption of the “Road map for provision of safe drinking water for All project - 2007”
22. Updated description of “Raw Water Problems” (Annexure B in PC-1)

## PLANT CONDITION (OPERATIONAL AND INFRASTRUCTURE)

Note: This data was recoded using the new classification

| HTC Code | WFP code (ZI) | Date     | District       | Union Council | SUR type | List type | WFP Stat | New OP Code (HT) | Age | Infra. Status | Operator Qualification | Q1 | Q2  | Q3  | Q4  | Q5  | Q6  | Q7  | Q8  | Q9  |   |
|----------|---------------|----------|----------------|---------------|----------|-----------|----------|------------------|-----|---------------|------------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|---|
| 55       | 551211        | 07-05-18 | Dera Bugti     | Town D.B      | x,x3     | x         | FN       | 1.1.2            | 10  | gd            | FA                     | y  | y   | y   | y   | y   | y   | fpr | a   | b   |   |
| 56       | 561221        | 05-05-18 | Dera Bugti     | Sui           | x,x3     | x3        | FN       | 1.1.2            | 10  | gd            | Matriculation          | y  | y   | n   | n   | y   | y   | a   | a   | b   |   |
| 17       | 17512         | 05-05-18 | Gwadar         | Gwadar North  | uf       | x         | FN       | 1.1.1            | 8   | gd            | Matriculation          | y  | y   | y   | y   | y   | fpr | fpr | fpr | fpr |   |
| 28       | 28711         | 07-05-18 | Jaffarabad     | Ro taj Pan    | fpr      | fpr       | FN       | 1.1.2            | 10  | gd            | Matriculation          | y  | y   | y   | y   | y   | y   | a   | a   | b   |   |
| 11       | 11322         | 04-05-18 | Kalat          | Iskalko       | x        | x         | FN       | 1.1.2            | 10  | gd            | FA                     | y  | y   | y   | y   | y   | y   | a,c | a   | b   |   |
| 14       | 14421         | 04-05-18 | Kech/ Turbat   | Apsar         | x2       | x2        | FN       | 1.1.2            | 8.8 | gd            | Middle School          | y  | y   | fpr | y   | y   | y   | a   | b   | b   |   |
| 62       | 621422        | 07-05-18 | Loralai        | Gareeb Road   | x        | x         | FN       | 1.1.1            | 10  | gd            | Matriculation          | y  | y   | y   | y   | y   | y   | a   | a   | a   |   |
| 40       | 40921         | 05-05-18 | Quetta         | Tareen        | x        | x         | FN       | 1.1.1            | 8.8 | gd            | Religious / Madrasah   | y  | y   | y   | y   | y   | y   | a   | a   | a   |   |
| 38       | 38921         | 05-05-18 | Quetta         | Liaqat bazar  | x3       | x3        | FN       | 1.1.2            | 5   | dm            | n/a                    | n  | n/a | n   | y   | n   | y   | a   | b   | b   |   |
| 33       | 33811         | 05-05-18 | Sohbatpur      | Ghani         | fpr      | fpr       | FN       | 1.1.2            | 10  | gd            | FA                     | y  | fpr | fpr | fpr | fpr | fpr | fpr | fpr | fpr | b |
| 52       | 521121        | 04-05-18 | Ziarat         | Zandra        | x4:y     | x         | FN       | 1.1.1            | 8.8 | gd            | Matriculation          | y  | y   | y   | y   | y   | y   | fpr | a   | a   |   |
| 66       | 661511        | 04-05-18 | Barkhan        | Rakni         | x,x3     | x4        | NF       | 2.2              | 8.8 | gd            | FA                     | y  | y   | n   | n   | y   | n   | fpr | fpr | b   |   |
| 32       | 32711         | 06-05-18 | Jaffarabad     | Mehrab Pur    | x        | x         | NF       | 2.2              | 8   | ne            | n/a                    | n  | n/a | n   | n/a | n/a | n/a | n/a | n/a | n/a |   |
| 39       | 39922         | 04-05-18 | Quetta         | Ghalzai       | x        | x         | NF       | 2.2              | 8.8 | dm            | BA                     | y  | n   | n   | y   | n   | n   | n/a | b   | b   |   |
| 12       | 12321         | 06-05-18 | Kalat          | Lakhorian     | x        | x         | NF       | 2.3              | 12  | dm            | BA                     | n  | n/a | n   | fpr | y   | n/a | n/a | n/a | b   |   |
| 51       | 511011        | 06-05-18 | Killa Abdullah | Majzai        | x        | x         | NF       | 2.3              | 8.8 | ne            | n/a                    | n  | n/a | n   | n   | n   | n   | n/a | n/a | n/a |   |
| 45       | 45911         | 05-05-18 | Quetta         | Faqir M Road  | x2,x3    | x2,x3     | NF       | 2.4              | 8   | dm            | n/a                    | n  | n/a | n/a | n/a | y   | y   | a   | a   | b   |   |
| 49       | 491012        | 05-05-18 | Killa Abdullah | Rojhani       | x2       | x2        | NF       | 1.1.2            | 12  | dm            | Middle / Primary       | y  | y   | y   | n   | n   | n   | n/a | n/a | n/a |   |
| 41       | 41911         | 04-05-18 | Quetta         | Tareen        | fpr      | fpr       | FN       | 1.1.2            | 5   | dm            | n/a                    | n  | n/a | y   | n   | y   | y   | a   | b   | b   |   |
| 58       | 581311        | 04-05-18 | Zhob           | Ganj Muhalla  | x4:y     | x4        | FN       | 1.1.2            | 9   | gd            | 8th                    | y  | y   | y   | y   | y   | y   | a,b | a   | b   |   |
| 64       | 641521        | 06-05-18 | Barkhan        | Sadar         | x,x3     | x2        | NF       | 1.2.1            | 8.8 | gd            | Matriculation          | y  | y   | n   | n   | y   | n   | fpr | fpr | b   |   |
| 20       | 20611         | 04-05-18 | Kachi          | Jalal Khan    | x2,x3    | x2,x3     | FN       | 1.2.1            | 9   | gd            | Primary School         | y  | n   | y   | n   | y   | y   | fpr | a   | b   |   |
| 1        | 1122          | 05-05-18 | Khuzdar        | Ferozabad     | x        | x         | FN       | 1.2.1            | 9   | gd            | Middle School          | y  | y   | y   | n   | y   | n   | n/a | a   | a   |   |

| HTC Code | WFP code (ZI) | Date     | District       | Union Council   | SUR type | List type | WFP Stat | New OP Code (HT) | Age | Infra. Status | Operator Qualification | Q1  | Q2  | Q3  | Q4  | Q5  | Q6  | Q7  | Q8  | Q9  |
|----------|---------------|----------|----------------|-----------------|----------|-----------|----------|------------------|-----|---------------|------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 4        | 4111          | 06-05-18 | Khuzdar        | Zeedi           | x2       | x2        | NF       | 1.2.2            | 8.8 | gd            | Matriculation          | y   | y   | n   | fpr | y   | fpr | fpr | fpr | b   |
| 3        | 3111          | 08-05-18 | Khuzdar        | Killi shair jan | x2       | x2        | NF       | 1.2.2            | 8.8 | dm            | Matriculation          | y   | fpr | fpr | fpr | fpr | fpr | fpr | fpr | fpr |
| 48       | 481021        | 04-05-18 | Killa Abdullah | Bojhra          | x2       | x         | NF       | 1.2.2            | 11  | dm            | Middle School          | y   | y   | y   | n   | n   | n   | n/a | n/a | n/a |
| 46       | 46911         | 05-05-18 | Quetta         | Saidabad        | x2       | x2        | FN       | 1.2.2            | 8.8 | dm            | n/a                    | n   | n   | n   | fpr | y   | y   | b   | b   | b   |
| 43       | 43911         | 04-05-18 | Quetta         | Alamo           | x2       | x2        | FN       | 1.2.2            | 3   | dm            | n/a                    | n   | n/a | n   | n   | n   | y   | a   | a   | b   |
| 59       | 591321        | 05-05-18 | Zhob           | Hassanzai       | x2       | x2        | NF       | 1.2.4            | 9   | gd            | Matriculation          | y   | y   | n   | n   | n   | n   | n/a | b   | b   |
| 31       | 31711         | 06-05-18 | Jaffarabad     | Bagh Head       | x        | x         | NF       | 1.2.5            | 10  | dm            | Middle School          | y   | y   | n   | n   | n   | y   | a   | a   | b   |
| 23       | 23712         | 07-05-18 | Jaffarabad     | Usta Muhammad   | x        | x         | NF       | 1.2.5            | 8   | gd            | None                   | n   | n/a | y   | n   | y   | y   | a   | a   | b   |
| 24       | 24711         | 07-05-18 | Jaffarabad     | Usta Muhammad   | x        | x         | NF       | 1.2.5            | 8   | dm            | Matriculation          | y   | n   | n   | y   | y   | y   | a   | a   | b   |
| 26       | 26711         | 05-05-18 | Jaffarabad     | Bagh Head       | fpr      | fpr       | NF       | 1.2.5            | 9   | dm            | Middle School          | y   | y   | y   | n   | y   | y   | a   | a   | b   |
| 61       | 611421        | 05-05-18 | Loralai        | MC              | x2       | fpr       | NF       | 1.2.5            | 5   | gd            | Middle, 8th            | y   | y   | y   | y   | y   | y   | fpr | fpr | a   |
| 22       | 22621         | 05-05-18 | Kachi          | Saleh Abad      | x2       | x2        | NF       | 1.2.6            | 9   | gd            | 9th                    | y   | y   | y   | n   | y   | y   | fpr | a   | b   |
| 19       | 19511         | 04-05-18 | Gwadar         | Hud             | uf       | x2        | NF       | 1.1.2            | 7   | gd            | Matriculation          | y   | y   | n   | y   | fpr | fpr | fpr | fpr | b   |
| 27       | 27721         | 04-05-18 | Jaffarabad     | Noskki Jadid    | x2       | x2        | NF       | 1.2.8            | 8.8 | gd            | FA                     | fpr | fpr | fpr | fpr | fpr | fpr | fpr | fpr | fpr |
| 23       | 23712         | 06-05-18 | Jaffarabad     | Samejee         | x        | x         | NF       | 1.2.8            | 9   | gd            | BA                     | fpr | fpr | fpr | fpr | fpr | fpr | fpr | fpr | fpr |
| 15       | 15422         | 04-05-18 | Kech/Turbat    | Turbat          | Other    | fpr       | NF       | 1.1.2            | 8.8 | gd            | Matriculation          | y   | y   | fpr | y   | y   | y   | a   | b   | b   |
| 5        | 5111          | 07-05-18 | Khuzdar        | WSS Katan       | x2       | x2        | NF       | 1.1.2            | 8.8 | gd            | Primary                | y   | y   | n   | fpr | y   | fpr | fpr | fpr | b   |
| 10       | 10222         | 06-05-18 | Lasbela        | Uthal           | Other    | x2        | NF       | 1.2.8            | 8.8 | gd            | n/a                    | n   | n/a | fpr | n   | y   | y   | n/a | n/a | n/a |
| 7        | 7221          | 04-05-18 | Lasbela        | Ala Abad        | Other    | x         | NF       | 1.1.2            | 8.8 | gd            | n/a                    | n   | n/a | n   | n   | n   | n   | n/a | n/a | b   |
| 8        | 8221          | 04-05-18 | Lasbela        | Gaddani         | Other    | x         | NF       | 1.2.8            | 8.8 | gd            | n/a                    | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| 34       | 34811         | 04-05-18 | Sohbatpur      | Nazband         | fpr      | fpr       | NF       | 1.2.8            | 6   | gd            | Matriculation          | y   | fpr | fpr | fpr | fpr | fpr | fpr | fpr | fpr |
| 37       | 37812         | 06-05-18 | Sohbatpur      | Hamid Por       | fpr      | fpr       | NF       | 1.2.8            | 11  | gd            | Matriculation          | y   | fpr | fpr | fpr | fpr | fpr | fpr | fpr | fpr |
| 35       | 35821         | 04-05-18 | Sohbatpur      | Sobat Por       | fpr      | fpr       | NF       | 1.2.8            | 10  | dm            | BSC                    | y   | fpr | fpr | fpr | fpr | fpr | fpr | fpr | fpr |
| 53       | 531122        | 05-05-18 | Ziarat         | Ghoshki         | x4:y     | x         | NF       | 1.1.2            | 8.8 | dm            | n/a                    | n   | n/a | n   | n   | n   | n   | n/a | b   | b   |

## Appendix 9-A

**ATTENDANCE OF THE GOB AND FIELD STAFF TRAINING WORKSHOP****Government staff**

| S# | Attendance |     |     | Trainee details      |            |             |                            |
|----|------------|-----|-----|----------------------|------------|-------------|----------------------------|
|    | D1         | D2  | D3  | Name                 | Dept.      | Cell Number | Email-address              |
| 1  | P          | N/A | N/A | Agha Imran Shah      | PHED       | 03023848284 |                            |
| 2  | P          | N/A | N/A | Imran Raheem Durrani | Irrigation | 03018386600 | Pda100dams@gmail.com       |
| 3  | P          | N/A | N/A | Zafar ullah Shah     | PHED       | 03009389009 | shahzafarullah@yahoo.com   |
| 4  | P          | P   | N/A | Tariq Nazir          | BOS        | 03058001776 | Tariqnazir450@gmail.com    |
| 5  | P          | P   | N/A | Khalil ur Rehman     | BOS        | 03337819980 | khaliksf@gmail.com         |
| 6  | P          | P   | N/A | Abdul Samad          | P&DD       | 03337928833 | Abduldamad570@yahoo.com    |
| 7  | P          | P   | N/A | Rehmatullah          | P&DD       | 03337913578 | Rehmat.tareenbos@gmail.com |
| 8  | P          | P   | N/A | Ahmed Jan            | BOS        | 03337808938 |                            |

**Field supervisors**

| S# | Attendance |    |    | Trainee details     |                |             |  |
|----|------------|----|----|---------------------|----------------|-------------|--|
|    | D1         | D2 | D3 | Name                | District       | Cell Number | Email-address  |
| 1  | P          | P  | P  | Ali Ahmed           | Khuzdar        | 03337984947 |  |
| 2  | P          | P  | P  | Amjad Ali Nasir     | Kech           | 03212979686 | <a href="mailto:amjadalinasil@gmail.com">amjadalinasil@gmail.com</a>         |
| 3  | P          | P  | P  | Ghulam Nabi         | Lasbela        | 03342907831 | <a href="mailto:Ghulamnabi_baloch@yahoo.com">Ghulamnabi_baloch@yahoo.com</a> |
| 4  | P          | P  | P  | Habib Ahmed         | Sohbatput      | 03003708665 | <a href="mailto:Jalib.jataak@gmail.com">Jalib.jataak@gmail.com</a>           |
| 5  | P          | P  | P  | Hameed ullah Kakar  | Loralai        | 03219516657 | <a href="mailto:Hameed.mirzai@gmail.com">Hameed.mirzai@gmail.com</a>         |
| 6  | P          | P  | P  | Mehboob Shahwani    | Kalat          | 03337964760 | <a href="mailto:mehboobshahwani@yahoo.com">mehboobshahwani@yahoo.com</a>     |
| 7  | P          | P  | P  | Muhammad Abid       | Zhob           | 03337780430 | <a href="mailto:Abid.sherani88@gmail.com">Abid.sherani88@gmail.com</a>       |
| 8  | P          | P  | P  | Muhammad Qasim      | Killa Abdullah | 03337751713 | <a href="mailto:mquasimkhan@gmail.com">mquasimkhan@gmail.com</a>             |
| 9  | P          | P  | P  | Muhammad Sadiq      | Quetta         | 03072437889 | <a href="mailto:meerzadasadiq@gmail.com">meerzadasadiq@gmail.com</a>         |
| 10 | P          | P  | P  | Muhammad Wasifullah | Dera Bugti     | 03157839083 | <a href="mailto:Wasif.waleed@gmail.com">Wasif.waleed@gmail.com</a>           |
| 11 | P          | P  | P  | Munir Ahmed         | Jaffarabad     | 03337879399 | <a href="mailto:Munirjon2007@gmail.com">Munirjon2007@gmail.com</a>           |
| 12 | P          | P  | P  | Rehmatullah         | Barkan         | 03337878250 | <a href="mailto:Agosh.org@hotmail.com">Agosh.org@hotmail.com</a>             |
| 13 | P          | P  | P  | Syed Sharaf-ud-din  | Ziarat         | 03168202134 | <a href="mailto:Syedsharaf12@gmail.com">Syedsharaf12@gmail.com</a>           |
| 14 | P          | P  | P  | Waseem Hussain      | Gwadar         | 03442333053 | <a href="mailto:Wish9nov@gmail.com">Wish9nov@gmail.com</a>                   |
| 15 | P          | P  | P  | Zahid Mengal        | Kachi          | 03337336838 | <a href="mailto:Zahid.mengal@yahoo.com">Zahid.mengal@yahoo.com</a>           |

## COMMITMENT AGREEMENT

I, \_\_\_\_\_ the undersigned holding CNIC# \_\_\_\_\_ hereby undertake that during the CDWA Evaluation Data Collection activity (from May 4 to May 8, 2018) I, and my field team members, will:

1. Complete all work with honesty, diligence and observance to the rules and the regulations learnt during training;
2. Maintain the list of all the expenses incurred during refreshment, transport services or any other payments in-kind and cash fairly, that related to the facilitation of participants;
3. Respect and honour the names of the Government of Balochistan, P&DD, and H&H Consulting to whom I am responsible for carrying the work;
4. Be entitled to fees and reimbursement of expenses upon the acceptance of the data and documents regarding household, Key Informant Interviews, Focused Group Discussions, Pictures and voice recording by Mr. Hussain and his appointed representatives;
5. Communicate with appointed quality assurance , field managers on any other matters as per contract sheet provided;

**Moreover:**

1. Apart from ensuring collective responsibilities I will train my field team according to the training I have received and will ensure that both male and female interviewers fully understand what is required in execution of field work

**Signee**

**Witness 1**

**Witness 2**

**Name:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**Sign:** \_\_\_\_\_

**Sign:** \_\_\_\_\_

**Sign:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Date:** \_\_\_\_\_

## MATERIALS PROVIDED TO TRAINING PARTICIPANTS

### Training

1. CDWA Eval Admin Attendance.docx
2. CDWA Eval Admin Contact Sheet.docx
3. CDWA Eval Admin Feedback 20180501 v1.docx
4. CDWA Eval Admin FS Training Plan 20180428.docx
5. CDWA Eval Admin FS Undertaking 20180502.docx
6. CDWA Eval Admin Pre-Post Test.docx
7. CDWA Eval Admin Standee.docx
8. CDWA Eval Admin Training Materials.xlsx

### Fieldwork Package

1. CDWA Eval Admin Management Team.docx
2. CDWA Eval Tools Attendance FGDs.docx
3. CDWA Eval Tools Attendance FGDs.pdf
4. CDWA Eval Tools Check Data Validation 20180429.docx
5. CDWA Eval Tools Checklist Quality Assurance 20180429 EN.docx
6. CDWA Eval Tools Data Management.docx
7. CDWA Eval Tools FGD 20180429 Urdu.docx
8. CDWA Eval Tools FGD NotePage 20180503.jpg
9. CDWA Eval Tools HH-SQ 20180501 Urdu.docx
10. CDWA Eval Tools KII 20180429 Urdu (for FST).docx
11. CDWA Eval Tools Sampling instructions.jpeg
12. CDWA Eval Tools WFP Status 20180502 EN.docx

## Appendix 9-D

## FEEDBACK FROM PARTICIPANTS OF THE TRAINING

| 1.02 Did you feel challenged by the training?<br><br><b>Staff</b> | 1.01 How do you rate the training overall? |          |           | Total     | %   |
|---|--|----------|-----------|-----------|-----|
|   | Poor                                       | Fair     | Good      |           |     |
| Not challenging   | 0  | 1        | 7         | 8         | 62% |
| Challenging   | 0  | 1        | 3         | 4         | 31% |
| Very challenging  | 0  | 0        | 1         | 1         | 8%  |
| Total   | <b>0</b>                                   | <b>2</b> | <b>11</b> | <b>13</b> |     |
|   |  | 15%      | 85%       |           |     |

| 2.03 Quality of instructions and facilitation<br><br><b>Staff</b> | 2.04 How extensive was the trainer's knowledge of the subject matter? |          |          | Total     |     |
|---|---|----------|----------|-----------|-----|
|   | Poor  | Fair     | Good     |           |     |
| Poor  | 0   | 0        | 0        | 0         | 0%  |
| Fair  | 0   | 0        | 1        | 1         | 7%  |
| Good  | 0   | 5        | 8        | 13        | 93% |
| Total   | <b>0</b>  | <b>5</b> | <b>9</b> | <b>14</b> |     |
|   |   | 36%      | 64%      |           |     |