End-line Evaluation REPORT

Telethon Funded Water, Sanitation and Hygiene Programme in Sindh, Pakistan

December 2019

Produced By

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List of Acronyms

ACRONYM	DESCRIPTION
CLTS	Community-Led Total Sanitation
DRR	Disaster Risk Reduction
FGD	Focus Group Discussion
HH	Household
IEC	Information, Education and Communication
KII	Key Informant Interview
LG	Local Government
NCA	Norwegian Church Aid
O&M	Operations and Maintenance
ODF	Open Defecation Free
PATS	Pakistan Approach to Total Sanitation
PHED	Public Health Engineering Department
PKR	Pakistani Rupee
PWD	Person with Disability
RDF	Research and Development Foundation
RWHTS	Rainwater Harvesting Tanks
TOR	Terms of Reference
UC	Union Council
VDC	Village Development Committee
WASH	Water, Sanitation and Hygiene
WSS	Water Supply Scheme

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Executive Summary

Norwegian Church Aid (NCA), with support from NRK Telethon funded and implemented a Water, Sanitation and Hygiene (WASH) programme to strengthen community resilience to flood, and improve access to safe drinking water, and provide adequate sanitation and hygiene for targeted communities in Sanghar and Thatta, Sindh province, Pakistan. The five-year long programme was implemented by NCA's local partner Research and Development Foundation (RDF) which ran from May 2015 to Dec 2019. GLOW Consultants, a specialised research firm, was commissioned by NCA to conduct a third-party end-line evaluation of the programme.

The programme was evaluated using the Development Assistance Committee (DAC) criteria from the Organisation for Economic Cooperation and Development (OECD) which includes relevance, efficiency, effectiveness, sustainability and other cross cutting themes (disaster risk reduction, environment, feedback mechanism) as measures of evaluation. The end line evaluation study used mixed methods, covering both qualitative and quantitative data. Key features of the methodology were a desk review of the programme documents, focus group discussions with beneficiaries, and key informant interviews with different stakeholders, including Public Health Engineering Department, Social Welfare and Local Government Department staff, as well as transit walks in the targeted communities. A purposive sampling approach was adopted and eleven villages were selected from both districts i.e. Sanghar (8 villages) and Thatta (3 villages). Findings of the study are as follows:

Relevance: Based on the findings from the primary and secondary data, it was evident that Telethon WASH programme was highly relevant to the needs of the targeted communities.This was confirmed based on the discussions with the communities. Furthermore, evidence from the baseline report highlighted that the programme activities were relevant to the needs of the communities, by addressing gaps highlighted by the initial evaluation. Both districts were experiencing a serious lack of access to clean water, adequate sanitation services, and hygiene awareness. Other contributing factors were recurring natural disasters (e.g. flood and droughts), challenging topography, low literacy rate, and high prevalence of malnutrition, contributed to the inferior WASH situation in these two districts. As a result, both Sanghar and Thatta have had very low human development index rankings and experience high poverty rates. The programme followed a comprehensive WASH design inclusive of disaster, environmental and gender considerations which made it even more relevant to the needs of the targeted communities, especially those related to WASH. Under this programme comprehensive research studies were also conducted such as Impact Analysis of Pakistan Approach to Total Sanitation on Ground Water, Health and Hygiene in Rural Community of Sanghar district, and another study on focusing on environmental assessment of WASH project in Sanghar and Thatta districts.

Efficiency: To understand efficiency, the evaluation team gauged the project in terms of its timeliness and cost efficiency. Based on the review of the programme work plans, which were cross-verified from the communities, this programme was delivered in a timely manner. Similarly, no major changes were made in the budget and programme targets. Operations and maintenance mechanisms were established and funds were generated to fix the water points. The average cost of a latrine was PKR 8,000 as the programme supported a low cost model, which was in line with other programmes of a similar nature in the region.

Effectiveness: As a result of this programme, the communities were in a better position to meet their WASH related needs. The programme used participatory methods for the formation of the

village development committees. The committees comprised of a president, a general secretary, a treasurer, and other members. Communities were satisfied with the performance of the committee. Women and girls were also involved, specifically in the identification of sites for water points and latrines to ensure and incorporate privacy, dignity and protection. Based on the feedback from the communities, it was evident that the hand pumps and latrines were provided at culturally appropriate locations, not far away from the households (easily accessible). The community was immensely appreciative of the construction and rehabilitation of water and sanitation facilities under this programme. It increased the provision of safe drinking water for the community members, not only protecting them from water-borne diseases, but also reducing travel time and labour that was spent on fetching water from afar, while simultaneously reducing the practise of open defecation. The communities particularly women are using the latrines as bathing spaces as well. This also contributes towards improvement in the personnel hygiene of the women. However, the current latrine design doesn't have enough space within latrine to properly take bath. Therefore, future latrine design may include provision of bathing space with appropriate drainage within the latrines. There was no evidence of water contamination in the water sources from the newly constructed latrines that could have resulted from from under water seepage; however the risk of contamination resulting from the ground surface was still there. The research studies mentioned in relevant section above also included aspect related to the construction of more sanitation facilities and any potential linkages with the ground water quality. The programme conducted pre and post water quality tests, which indicated that the available water was of a better quality. As the intervention areas have high water turbidity, this posed a continuous challenge for the programme which has to be tackled through innovative methods in the future.

Sustainability: The communities will contribute towards the long term utilisation of Operations & Maintenance (O&M) skills of the WASH interventions delivered under this programme. Further sustainability of WASH infrastructure faced an increase because of establishment of the O&M funds generation mechanism. Similarly, PHED now maintains larger water supply schemes and will be operational for a longer period of time. In addition, government has introduced water tariff, even though more efforts are needed for this experience to become fully effective. The sanitation facilities constructed are being utilized by the communities. This suggests long term sustainability of the sanitation infrastructure. The capacity building efforts made for the community, local masons, vendors and government staff will also help sustain the programme interventions. Women and girls are actively engaged in the committee which will increase the sustainability of village development committee.

Cross Cuttings: The programme made an active effort to ensure participation of women and girls and other marginalised communities as part of the programme. The evaluation team recorded that separate committees for women were established, responding to cultural sensitivities. Women were engaged in identification of sites for WASH installation. This programme also covered several minority villages. From DRR perspective, hand pumps and latrines were provided on raised platforms to ensure their accessibility in flash floods generated from heavy rains. Pour flush latrine were provided and connected with septic tank to ensure safe disposal of human excreta. A right holders feedback and grievance redressal system were established where 332 feedback and complaints were registered through Phone (205), written (91). and through RDF staff (36). Normally the procedure took seven days to response on any feedback or complains. During the evaluation, it was clear there were no outstanding grievances which needed to be responded.

Following is the overall rating for the programme:

Evaluation Criteria	Rating 1-5 (1 Low, 5 High)				
	1	2	3	4	5
Overall Ranking					
Relevance					
Efficiency					
Effectiveness					
Sustainability					

Based on the evaluation findings, the following are the key recommendations:

- It would bring added value to future interventions of a similar nature to explore installation of water meters to regulate solar powered water supply schemes and to ensure that there is no over extraction of water. Carrying out ground water re-charge study can also be beneficial in assessing the actual situation and designing the interventions.
- There is a need to further invest in the capacity building of water management committees and to consider including new members as part of the committees such as school teachers, elected members and, staff of PHED in the committee.
- As under-ground water quality is a major issue, NCA may explore potential innovative practices from similar contexts (e.g. Bangladesh for areas with high water table / high turbidity) to explore new ways to ensure provision of clean drinking water for the targeted communities.
- As latrines are also utilized for bathing purposes especially by women and girls. It might be a good idea to consider bathing needs and separate provision for draining the wastewater generated through bathing activity in the design as well.
- Linkages can be further strengthened with line departments by providing them more opportunities to be involved in the programme activities.

Picture 1:Hygiene Awareness Raising Material Displaced by Programme

Section 1: Background Information

Norwegian Church Aid (NCA), in conjunction with their partner Research and Development Foundation (RDF), implemented a programme to strengthen community resilience to flood, improve access to safe drinking water, and provide adequate sanitation and hygiene facilities for targeted communities in Sanghar and Thatta districts of Sindh province, Pakistan. The programme was implemented throughout 2015 till 2019 and was funded under NRK Telethon funds. The programme was divided into three projects, namely:

1. Strengthening community resilience to floods and improving access to safe drinking water, adequate sanitation and hygiene for 140,500 people in Sanghar & Thatta districts of Sindh province (May 2015 to Dec 2019)
2. Sustainable WASH Assistance to 45,500 right holders in Disaster Affected Areas of district Sanghar, Sindh province, Pakistan (Oct 2017 to Dec 2018)
3. Sustainable WASH Assistance to 35,000 right holders in Disaster Affected Areas of district Sanghar, Sindh province, Pakistan. (Jan 2019 to Oct 2019)

The programme was implemented in total 257 villages.This include 48 villages in Thatta and 209 villages in Sanghar districts, while a majority of the activities were concentrated in Sanghar district. The programme targeted both drought and flood affected areas.

GLOW Consultants, a specialised research firm, was commissioned by NCA to conduct a third-party evaluation of this water, sanitation and hygiene (WASH) programme.

1.1 Overview of the programme

Rural Sindh is amongst the most underdeveloped areas of Pakistan. One of the biggest challenges it faces is the scarcity of safe drinking water, a major reason for which is lack of and declining rain-fall.. A large part of the local population uses surface water sources, while the rest uses rain or ground water sources, with little to no access to the sewage system, many people practising open defacation as a result.. A baseline study was conducted under Telethon I. The key findings of the baseline suggest that 84% of the families were not treating water, and the communities were not aware of water contamination issues and water treatment options. The baseline further suggests that due to unavailability of drinking water in close vicinity, as in many instances the water was brackish or the water supply schemes were dysfunctional, the people have to walk 3 to 5 Km to collect water. Baseline identified women and children as the key responsible persons for bringing water. Similarly, the baseline identified that 84% of the families were practicing Open Defecation (OD), and 52% of the population (particularly children) was frequently affected from diarrhoea. To cater to the current situation NCA, in partnership with RDF implemented, water, sanitation and hygiene (WASH) programme to provide targeted communities with access to safe drinking water, improved sanitation facilities (following Pakistan Approach to Total Sanitation) and hygiene awareness.

Table 1: Programme Goal and Outcomes	
Programme Goal	224,500 vulnerable right holders affected by recurring floods since 2010 in Sanghar and Thatta districts of Sindh now have improved health and living conditions.

Programme Outcomes	• 224,500 rights holders have access to sound sustainable water supply services; • 66,808 rights holders have access to dignified and sustainable sanitation facilities; • 224,500 rights holders have decreased morbidity incident rates related to poor hygiene practices (unsafe drinking water, open defecation, lack of hand washing practices); • Target population better equipped on disaster and risk management to better cope with future disasters; • Most vulnerable population (women, girls, minorities, elderly and people with disabilities) in the target areas have access to WASH services without any intimidation, cultural barrier or abuse; • Rights holders' organizations have the capacity for management of sustainable community water supply and sanitation services.

1.2 Purpose of the Evaluation

The main purpose of the evaluation is to understand the extent to which the proposed objectives and outcomes were achieved in terms of DAC criteria which includes relevance, effectiveness, efficiency, and sustainability as defined below:

Box 1: Purpose of the evaluation

- ***Relevance:*** is the extent to which key stakeholders were involved during programme implementation.
- ***Effectiveness:*** is the extent to which programme coverage, whether access to water, sanitation, and hygiene services increased during these ventures or did not increase.
- ***Efficiency:*** is the extent to which the targeted communities effectively participated in programme implementation.
- ***Sustainability:*** covers three important themes: social, environmental, and operation and maintenance. Of these themes, WASH maintenance most affects the sustainability of the intervention. While due attention was to be given to institution building to institutions that operate, maintain and manage the WASH facilities.
- Cross-cutting issues: that covered Gender Analysis, Disaster Risk Reduction, and Grievance Redressal System

1.3 Objectives of the Evaluation

The purpose of the end-line evaluation was to assess programme design and implementation with emphasis on results and achievements as compared to the findings of the baseline study conducted in the year 2015 and, other assessments conducted in the area along with village profiling done each year. Detailed activity of the exercise includes:

Box 2: Objectives of the Evaluation

- Information related to End-line status of the programme in relation to the set time lines and initial programme work plan.
- Collect and analyse information related to previous and existing WASH related behaviours / practices, disaster copping mechanism and capacities.
- Assess the quality of community mobilization and feedback mechanism (community / individual to RDF) used in the programme.
- Information regarding any changes improved participation of women in decision making relevant to WASH services and DRR. Analyse the outcomes of the programme in terms of meeting the priorities of women against the baseline study which was conducted in July 2015.
- Assess the status and functionality of the water supply facilities which includes hand pumps (Afridev, lead lines) rainwater harvesting tanks, public water supply schemes, water storage ponds, water supply using solar energy, low cost household latrines and other water & sanitation related inputs.

- Assess the level of coordination with and capacity development of stakeholders including Government authorities and Members of village development committee on WASH and DRR.
- Assess the level of acceptability, ownership and sustainability of structural (WSS, Sanitation facilities) and non-structural (VDCs, Hygiene promotion, Capacity building) support provided to communities during the programme.
- Assess / identify areas of improvement for future focus and strengthening during the implementation of future programme.

Section 2: Evaluation Objective and Methodology

This section contains details about the methodology adopted to evaluate the programme, which was an end-line evaluation.

2.1 Methodology

The evaluation methodologies were broadly guided by the Terms of Reference (ToR) and refined by the evaluation team in consultation with NCA at the inception stage. The key features of the methodology are outlined below:

2.1.1 Review of Relevant Documents / Secondary Data

The evaluator reviewed the relevant documents related to this programme e.g. programme proposal, programme reports, beneficiary database, and lessons learned workshop reports etc. The evaluation team carried out a desk study of the available data and reports, and developed tools accordingly.

2.1.2 Field Visits

To ensure various project interventions and geographically diverse locations are visited by the evaluation team, a purposive sampling approach was adopted for the field visit. Because most of the programme interventions were in Sanghar district, eight villages were covered from the district. The targeted villages included villages both from the desert and the irrigated areas of Sanghar district.

Three villages were selected from district Thatta. The type of interventions was also considered when selected the villages to ensure the evaluation team observed a variety of the interventions carried out under this programme.

Picture 2: Evaluation Team Meeting Key RDF Programme Staff

The details of the villages visited in both the districts are given below:

Table 2: Sampled Villages for Evaluation			
S. No.	**District**	**Union Council**	**Village**
1	Sanghar	Loon Khan	Qazi Rasool Bux Rajar
2	Sanghar	Khori	Haji Tayab Dars
3	Sanghar	Hamzo Khan Dars	Faqeer Sadique Bhambhro
4	Sanghar	Daro Bazar	Kamil Mangrio
5	Sanghar	Daro Bazar	Narain Das
6	Sanghar	Kamil Hingoro	Sanwan Hingorjo
7	Sanghar	Kamil Hingoro	Ranaho
8	Sanghar	Kamil Hingoro	Dulo Hingorojo
9	Thatta	Onger	Panhwar Farm
10	Thatta	Tando Hafiz Shah	Mage Ladho Mir Bahar
11	Thatta	Tando Hafiz Shah	Ameer Ali Shah

Picture 3: Location Map of Programme Districts in Sindh Province

2.1.3 Key Informant Interviews

Meetings and interviews with the programme stakeholders listed below were conducted:

- NCA / RDF staff;
- WASH Committee / Village Development Committee representatives;
- Trained Masons;
- Trained Sanitation Mart Owners; and
- Government Officials including staff of Public Health Engineering Department (PHED), Social Welfare and Local Government (LG) department .

Picture 4: Senior Evaluator Meeting a LG Staff in Sanghar

Picture 5: KII with Mason trained as part of the programme

2.1.4 Focus Group Discussions (FGD's)

During the visit, 18 Focus Group Discussions were conducted in the targeted villages with the programme right holders To amply accommodate the views of women in the community, separate FGDs were conducted with men and women.

Picture 6: FGD with male programme beneficiaries in Sindh

Picture 7: FGD with female programme beneficiaries in Sindh

2.1.5 Transect Walk

Transect walks were conducted in the targeted villages to observe overall WASH situation in the area. This included visiting water facilities sanitation facilities etc established as part of the programme. It provided the evaluation team with the opportunity to observe on the ground reality of the situation to be able to paint a clearer and reliable picture.

2.2 Presentations of Results

Overall evaluation results are presented through an easy to read table with five colour-coding, explained in the figure below.

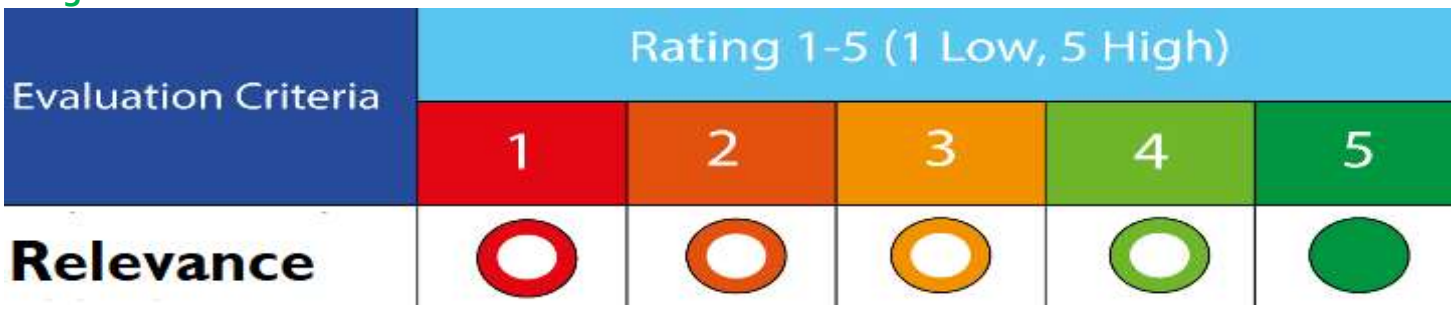
Figure 1: Key to results ranking matrix

Ranking	Description	Points
Results Fully Achieved	Based on the data available and the evaluation findings, the NCA programme results were fully achieved and exceeded expectations. Programme management's best practices are in place. No corrective action is required. This refers to a situation where all the programme activities, processes, documentation, procedures, clarifications meet the objective set out in the programme proposal and reflects a solid understanding of the activities and best practices.	5 (Dark green)
Results Mostly Achieved	Based on the data available and evaluation findings, the NCA programme results mostly met acceptable levels. Programme management's best practices are in place. No or minor corrective action is required. This refers to a situation where all the programme activities, processes, documentation, procedures, clarifications meet the objective set out in the program proposal and reflects a solid understanding of the activities and best practices	4 (Light green)
Results Partially Achieved	Programme results partially achieved, and closer to meeting acceptable levels. Some corrective action is required to fully meet programme results as set out in the proposal. These corrective actions may or may not be in NCA's control.	3 (Yellow)
Results Marginally Achieved	Programme results are only marginally achieved. They barely meet the quality standards. Substantive corrective action is required to meet required standards.	2 (Orange)
Results Not Achieved	Programme results are not achieved. Serious weaknesses and limitations are observed. There are some serious issues with the implementation. A complete rethinking around the program delivery will be required to achieve the required results.	1 (Red)

Section 3: Findings

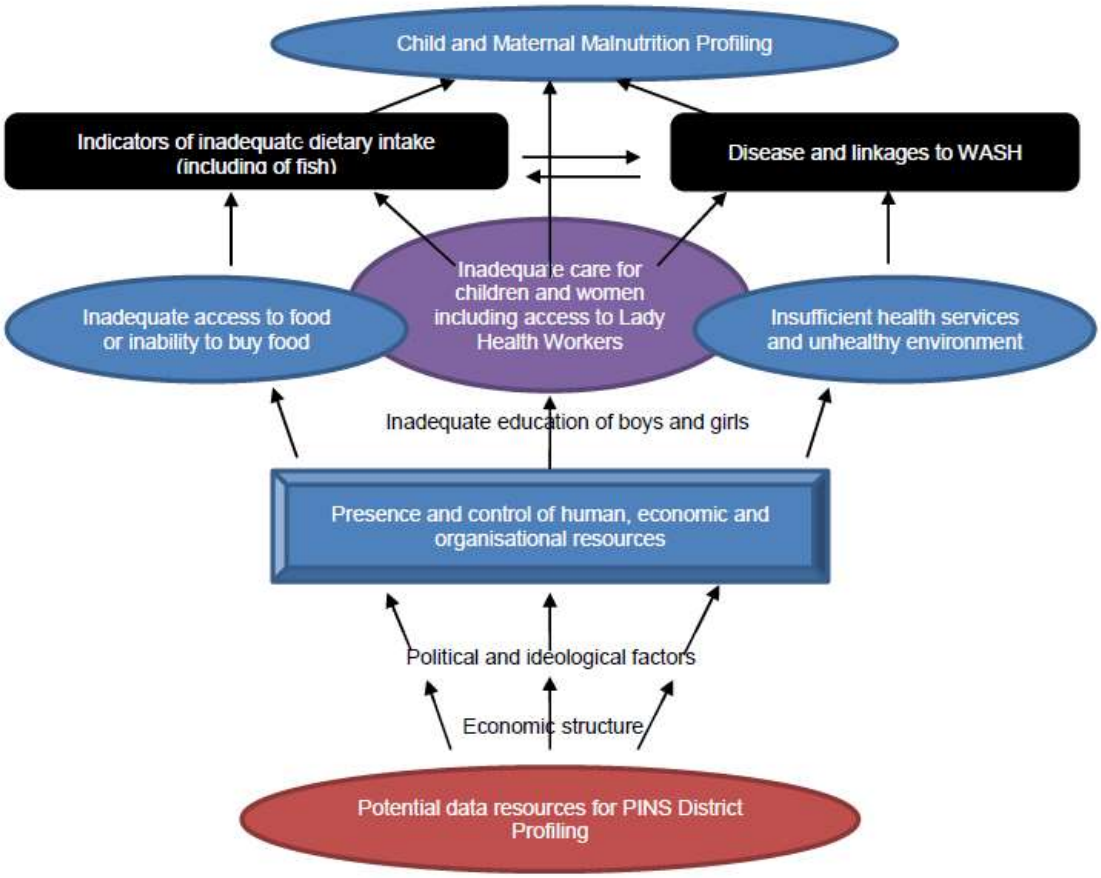
Findings are grouped under each evaluation criteria in this section.

3.1 Relevance



As indicated above, to evaluate the NCA programme OECD DAC criteria have been used to measure the relevance of the intervention. It included key parameters such as the extent to which the NCA activities are suited to the priorities and policies of the target group as well as whether they are in line with government policies. More specifically, it looked into the extent to which NCA's WASH interventions were tailored to address the core problems of the targeted communities and locally prioritised needs of the most vulnerable, elderly, and disabled target groups/right holders. It also looked into the extent to which the assistance provided was in compliance with humanitarian principles and standards. The program's activities and overall achievements reflect that NCA adopted an integrated approach with a strong emphasis on WASH. The need for this program is evident from UNICEF's advocacy for the need to focus on a strong WASH component to effectively address the nutrition and health challenges in Sanghar and Thatta and other places, as can be seen from the figure below:

Figure 2: Adopted from UNICEF Multi Sectoral Approach to Nutrition 2015



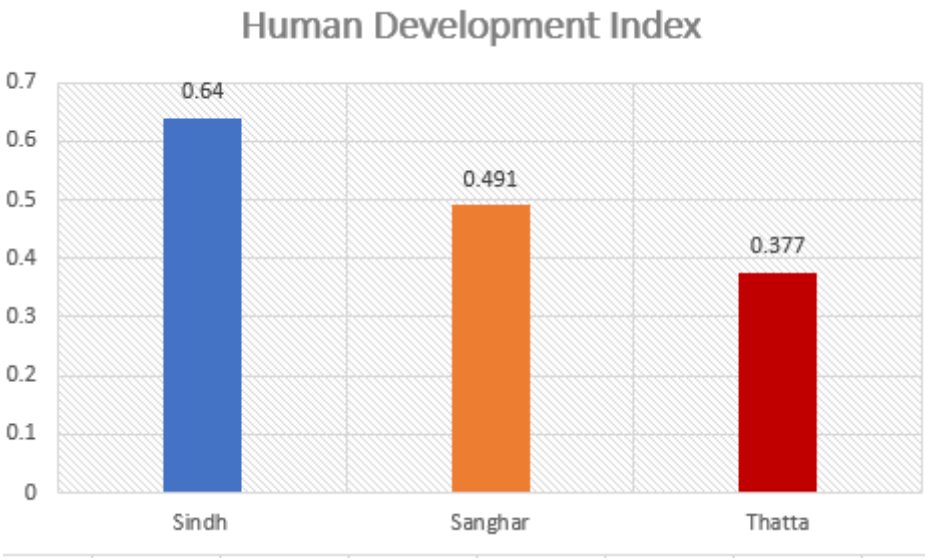
Overall, NCA interventions were highly relevant to the multi-faceted humanitarian crisis faced by the two programme districts in Sindh. The overall nature of the interventions introduced was highly relevant to current community needs in the region, and directly addressed a lack of facilities that afford basic human dignity. These two districts Pakistan have been known to be highly prone to natural disasters especially floods and droughts. These districts are also some of the most adversely affected areas in the region from a nutritional perspective, suffering heavily due to exce3ssive flooding in 2010 and in the years following that as well. The targeted region general fares very low on the Human Development Index (HDI), often stuck in a perpetual cycle of underdevelopment. Some of the major disasters affecting these areas have been listed below.

Table 3: Major Natural Disasters Affecting Programme Districts (since year 2000)

Major Natural Disasters Affecting Programme Districts (since year 2000)	
2000 Drought	At least 1.2 million people in Sindh and Balochistan were affected by drought including those in the two programme districts.
2007 Cyclone Yemyin	At least 730 people died and 1.5 million were affected including those in the two programme districts.
2010 Pakistan Floods	Approximately, 2,000 individuals lost their lives and over 20 million were affected including those in the two programme districts.
2012 Pakistan Monsoon Floods	Approximately, 455 lost lives, and over 5 million were affected including the two those in the programme districts.
2014 Floods	Approximately, killed 367 people and affected more than 2.5 million including those in the two programme districts.
2015 Floods in Chitral	Caused human losses and intensive damages to public infrastructure.
2014-2018 Drought	Selected areas of districts in Sindh/Balochistan including those in the two programme districts.

The figure above indicates how the regular and recurrent nature of the emergencies in the country has constantly negatively affected the region and its inhabitants.As a result, present facilities and efforts towards the development of WASH facilities and the overall development of the region have been constantly hindered.. For example, Thatta (0.377) and Sanghar (0.491) are both ranked very lowon the HDI whereas Sindh's (0.64) overall HDI is significantly higher from than these districts, as can be seen in the figure below.

Figure 3: Human Development Index 2015



Otherdevelopment indicators also show high poverty and food insecurity in the two targeted districts, as can be seen in the table below:

Table 4: Overall Development Indicators

Districts	Poverty Rates	Proportion of Poor Household Headed by Women	Level of Urbanization	Ranking on Integrated Food Security Phase Classification
Thatta	72.97%	72.64%	11.20%	Phase 3 - Crisis
Sanghar	50.57%	43.56%	22.80%	Phase 3 - Crisis

(Data Source: Benazir Income Support Programme, FAO and UNDP)

The NCA utilized a needs-based assessment of the region through discussions with members of the targeted communities and key informants, also working closely with the government and its field partners, to identify and prioritise needs directly affecting the region. NCA's interventions were in line with the WASH Cluster operationalized after the 2010 floods. They were also based on the government's priorities and policies, confirmed during interviews with government officials, and a review of government development strategies for the province of Sindh. For example, in September 2018, Government of Sindh declared a drought emergency in seven *dehs* in Sanghar and Khipro talukas of Sanghar necessitating water related interventions. It is important to note that these areas had been experiencing a drought-like situation and its effects as early as 2014, well before any needs were recognized and a response launched.

The NCA programme was relevant to the needs of the most vulnerable communities in the targeted districts. The practices and designed interventions adhered to the Common Humanitarian Standards, and government requirements. The program interventions were also technically reviewed before they were implemented.

According to the baseline report a majority of the households (HHs) did not have access to safe drinking water. FGD participants from both Sanghar and Thatta districts confirmed that communities fetch water from far flung water channels before the interventions were introduced. The water they had to fetch traveling far distances was still not safe for consumption and was polluted with harmful germs and waste material.. Furthermore, FGD participants belonging to the irrigated areas of Sanghar mentioned how they also experienced water shortage in their villages mainly due to bad quality / brackish water. Most villages relied on old hand pumps that used lead lines connected to far flung areas and with time had become dysfunctional and contributed to water shortages. Consequently, old hand pumps become dysfunctional that came from far away through lead line. The subpar quality of water that was available caused water-borne diseases including gastro-intestinal and diarrheal diseases, especially in children. The baseline study also highlighted how that a large number of members of the community practiced open defecation. At the end line evaluation stage, the FGD participants confirmed that open defecation in their areas was common. They also brought to attention how open defecation was a direr problem for women because of hygiene and safety concerns, and many women had to travel far distances to be able to defecate. The FGDs with the community members confirmed the earlier comments about water-borne diseases within the community, prior to program interventions, suggesting that WASH facilities were in a terribly poor condition in the area and needed the project interventions.

in line with the situation discussed above the programme objectives aimed to improve the living conditions of the targeted communities' when compared to the pre programme situation, as identified in the baseline evaluation. Given the extensive study into the context of the targeted communities before the program, the programme objectives were specific and had considered the need to mainstream disaster risk reduction (DRR), protection, and gender aspects. At the same time the program activities' design allowed efficient integration of water, sanitation, and hygiene activities.

The water component included the provision of drinking water through the construction of water supply schemes (WSS) and also through the provision of new, and rehabilitation of existing, hand pump infrastructure. Similarly, lead lines were provided with the hand pumps in areas where safe water was not immediately available in ample supply closer to the community.

The sanitation component was addressed through the construction of latrines, carried out under the overall umbrella of Pakistan Approach to Total Sanitation (PATS). The approach was adopted because it allowed the implementation of an approach most relevant and suited to community's needs. To make the latrine cost affordable for the poor communities, the latrines were constructed using component sharing i.e. till floor level latrine construction was funded through the programme and superstructure construction was the responsibility of the community. To promote messages about hygiene and increase community awareness, hygiene messages were delivered and Education, Information and Communication material (EIC) was delivered. To allow maximum absorption of messages and reach a wider spectrum of the population, local language was used in information dissemination and the EIC material included several pictorial illustrations. RDF's team delivered various hygiene sessions and covered several topics on hand washing, personal, food, and domestic hygiene, etc. The evaluation team recorded that participants were satisfied with these sessions and were practicing what they were being taught. Female FGD participants from

the village Faqeer Sadiq Bhambro mentioned how they now maintained more elaborate personal hygiene.

All the WASH components integrated DRR aspects for example the construction of latrines and hand pumps on higher grounds and raised platforms. These were highly relevant initiatives as most of the targeted areas are prone to re-current flooding, especially during monsoon season, while the desert area is prone to sand storms and droughts. The programme had predominantly adopted a convergence approach where all the three sub-sectors of WASH i.e. water, sanitation and hygiene worked together along with the integration of DRR, gender and protection to improve the status of the targeted households in an all-encompassing way. The selection of the right holders was primarily done on the basis of water and sanitation needs, and to address the needs of the most vulnerable within these communities including persons with disabilities (PWDs), and providing them with the appropriate support that addressed their specific needs. Overall, the designed intervention was in line with the communities' needs, and aligned with the programme objectives.

The programme engaged both male and female community members in the programme activities. The right holders' households were selected considering the WASH needs of the households, and particularly those of women. FGDs and KIIs' participants mentioned that broad based community meetings were conducted and VDC members were elected by them in those meetings. Women had separate committees in the targeted villages to ensure all WASH activities were relevant to the specific needs of women.

The programme had also taken the government line departments e.g. Public Health Engineering Department (PHED), Local Government and Social Welfare Department on board. The government was not only kept updated about the programme progress through regular updates but the departments were also involved in the monitoring of activities for example the social welfare department's staff was part of the committee that declared villages Open Defecation Free (ODF) once the communities started using latrines. FGD participants of desert village Dulo Hingorjo and village Narian Das noted how open defecation in the village had now been almost entirely eliminated as a result of the programme.

To surmise, the evaluators have found that the programme design was decidedly relevant to community needs on the ground and was aligned with the local community's priorities. This was reconfirmed by the primary and secondary data, including first hand input from the right holders.

3.2 Efficiency

Using OECD DAC Criteria to measure efficiency, the evaluation team looked into programme outputs, qualitative and quantitative, measured against program inputs. The research team examined the cost-effectiveness, timeliness, and efficiency of the activities. .. The team found that there were no time lags between different programme activities and no increase in the costs, except minor variations due to yearly inflation rates and design modifications catering to project needs. There was generally a high level of satisfaction amongst the right holders when it came to the timeline. The same pattern was observed for all kind of responses, including drought and floods.

NCA programme was able to achieve cost efficiency. This was made possible through effective planning, competitive procurement processes, and proactive cost negotiation. Based on the evaluation's findings, NCA and RDF had a well-defined procurement process which was led by RDF with active engagement and oversight from NCA's staff. Depending on the nature of the acquisition and its financial value, different processes were employed, namely i) cash procurement (only for minor routine use office supplies); ii) request for quotations and iii) open tender. The quotation processes were further divided into two categories i.e. open quotations and sealed bids.

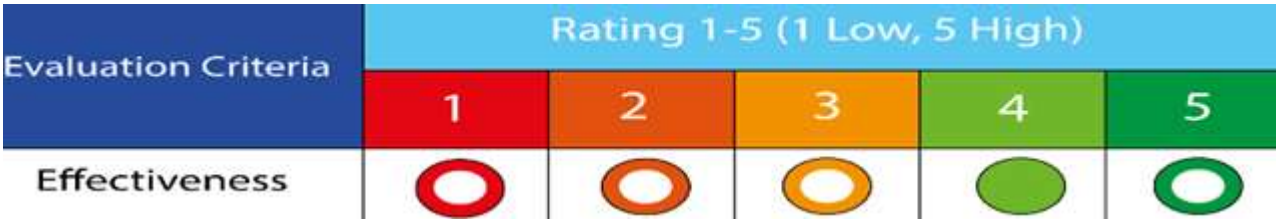
As a result of these well-designed policies for cost management, the programme supported the construction of latrines with an exceptionally low-cost model that cost approximately PKR 8,000. This included active and commendable contribution by the community in the form of labour and material for the superstructure. The septic tanks were also constructed by the community through their own contribution. The value for money that the project for constructing latrines exhibited, was also similarly reflected in other programs.

For water supply schemes, operations and maintenance (O&M) mechanisms included funds generation/collection established through the VDCs. In some areas, the communities collected funds on a monthly or quarterly basis, and in other areas they contributed when it was required. This system helped in ensuring each benefitting HH contributed to the maintenance of the scheme, which also meant that a single HH was not overburdened with the overall cost of maintenance. Masons were also trained in this programme to construct low cost latrine and also on how to repair them. This resulted in an efficient utilization of the community resources and ensured that the WASH infrastructure provided remained functional utilizing the community's own resources, i.e., their skills and contribution. It is important to note that some of the larger schemes which were rehabilitated under the programme have now been taken over by the PHED for a longer term O&M. This was done as a result of a directive that was issued by the government on provincial level. Under this arrangement the districts will receive annual O&M funds, and the PHED will utilize these funds to maintain these schemes across the districts.

In conclusion, the programme was delivered efficiently within the agreed timeframe and budget. The programme reports and feedback from the key staff of NCA and RDF also confirmed that there was no major shift in the programme targets. Similarly, the communities feedback suggests that interventions were delivered to them as per timelines as communicated to them. NCA programme was able to efficiently address the needs related to the major deficiencies in the WASH sector amongst the population groups facing a lack of WASH services.

Picture 8: A Programme Visibility Sign with List of Activities Completed

3.3 Effectiveness



The OECD DAC criteria provided the overall framework for measuring NCA programme's effectiveness. It looked into the extent to which the programme objectives were achieved as well as the major factors that influenced the achievement or non-achievement of the objectives. The evaluation team also looked into the extent to which the achievements of the targets lead or was likely to lead to the achievement of the overarching objectives set out for the NCA programme.

Effectiveness of the programme was achieved as a result of strong monitoring of activities. Based on the evaluation findings, the monitoring system was well managed and provided comprehensive information in a user friendly format. NCA's senior team members provided the in-house monitoring functions, augmented through RDF monitoring functions. These monitoring functions were primarily focused on three main aspects:

- Situation monitoring and support with needs assessment
- Progress monitoring
- Output monitoring and reporting

In addition to these three functions, monitoring functions within NCA also included documenting lessons learnt. NCA maintained a well-developed a database for output tracking and reporting system. This allowed NCA to track outputs by indicators and targets. NCA was able to achieve its total target as reflected by the figure below.

Table 5: NCA Programme Beneficiaries (2015-19)

Programme Beneficiaries			
Activities	**Unit**	**Planned Beneficiaries**	**Actual Beneficiaries**
Water Supply (total beneficiaries)		**224,500**	**227,538**
Construction of Communal rainwater harvesting tanks	Tanks	4,200	4,956
Rehabilitation of Public Water supply schemes	Schemes	69,000	59,721
Installation of new hand pumps with lead lines and raised platforms	Hand Pumps	25,000	30,068
Installation of afridev hand pumps	Hand Pumps	7,500	7,622
Installation of direct bore hole hand pumps with raised platforms	Hand Pumps	24,600	27,185
Rehabilitation of existing dysfunctional hand pumps	Hand Pumps	21,000	30,247
Rehabilitation of dug wells	Dug Wells	16,000	13,235
Rehabilitation of existing water reservoirs connected with lead line	Reservoirs	11,000	11,908
New Reservoirs or Small Dam Tarai	Reservoirs	16,800	9,101
Communal Village level water supply scheme powered by Solar system with the Provision of livestock watering	Tanks	14,400	16,936
Rehabilitation of existing dysfunctional hand pumps (afridev and shallow)	Hand Pumps	15,000	11,976
Sanitation (total beneficiaries)		**66,808**	**69,694**
Construction of household latrines by communities using CLTS with subsidy	Latrines	66,808	69,694

A little over half of the NCA right holders were women. As per the programme database, NCA achieved the targets set under each of the different indicators. NCA was able to keep its commitment of the Grand Bargain which aimed to get more resources into the hands of the people in need. NCA was able to achieve this by ensuring it worked closely with the communities through engaging its local partners and providing meaningful engagement to the local communities in the programme implementation. During FGDs with communities, almost all the respondents agreed that communities were provided with opportunities to engage in the programme delivery such as right holders and site selection for the interventions.

The village committee formation was participatory as the committee was formed by taking in puts from the larger community. The FGD participants shared that RDF team (including female member) came to the village. The RDF team then invited all the community members to one location and shared the importance and benefits of forming a village committee. The non-committee members of the FGDs further shared that once we all agreed to form a committee, then we elected committee members including the president, general secretary and finance manager in a participatory and transparent manner. We are happy and satisfied with the committee formation process adopted.

Picture 9: Hand Pump Provided Under the Programme

The communities in FGDs further shared that the committees generally met on a basis of requirement. Based on the communities' feedback the top three activities of the committee were to collect funds for maintenance of WASH infrastructure, interact with NGOs, and solve the villages'problems.

Picture 10: Latrine Supported Under the Programme

The engagement of women and girls ensured that their concerns related to privacy, dignity and protection needs had been assuredly incorporated. The women also actively participated in the supporting activities including the construction of smokeless, environment-friendly stoves. The

active involvement of the community in the implementation of the program initiatives allowed more acceptance within the community of the changes advocated.

The community exceedingly regarded the provision of water related support i.e. installation or repair of hand pumps and provision of water supply schemes as an essential element to fulfilling their WASH needs. They shared that the hand pumps not only fulfilled their own safe drinking water needs but also allowed water for their livestock that they provided for suing a small connected storage with the hand pump.. They also utilized the hand pump water for personal and domestic hygiene. . Based on the feedback from the communities it could be inferred that the hand pumps provided were easily accessible by the households (either by being close by or by being connected through lead line hand pumps), removing one of their major logistic and cultural concern about having to travel (especially for women) long distances for safe water. Under the programme, water quality tests were also conducted to ensure that the water provided to the communities was safe. In both Sanghar and Thatta districts, FGDs with participants confirmed that RDF conducted water quality tests of the water sources. During an interview with Water Quality Officer from RDF, water samples were collected from the source and sent to PCRWR laboratory of Nawabshah to conduct both chemical and physical tests.

The programme intervention also included the provision of solar based water supply schemes. While it is in effect an essential benefit for the remote communities where availability of regular and continuous access to electricity is a challenge, it also becomes important to ensure that the operation of these schemes is properly regulated to prevent over extraction of water. In the desert areas the programme also constructed underground rainwater harvesting tanks. These tanks are not only being used for storage of rain water but in the event of no rain to fill them, the communities filled them with water they collected from other farther water sources on a periodic basis.

The UC Ongar in Thatta district, and UC Kamil Hingoro (also known as Achro Thar – White desert) in Sanghar district are desert areas.. As a result the UC has limited freshwater resources, being extremely arid, while ground water (aquifer) is brackish. In this context, the only source of potable water is rainwater during monsoon season. Wwhilst very low rainfall has been observed in this area, some perennial dug wells also exist, which had been rehabilitated for community needs during the project. However, to be able to completely meet the community's water needs, 300 rainwater harvesting tanks (in pairs)were constructed, that were able to provide water up to two months after the rains.

Picture 11: Rainwater Harvesting Storage

A key success of the programme was to develop water points that provided good quality water. In many of the targeted area, groundwater was mostly brackish. Under this programme, NCA's partner RDF established a water quality-testing laboratory at the field office of Khipro and Thatta. A total of 1,302 water samples were collected and analysed for physical, chemical and biological contamination i.e. Physical Tests (Colour, taste, odour and turbidity), chemical tests: total dissolve solids (TDS), power of Hydrogen (pH), conductivity, total hardness, chloride, sulphate, arsenic, fluoride, nitrate and bacteriological: faecal coliform. After the tests, 640 water samples from 640 locations were found fit for drinking purpose. Based on the water test reports the team finalized the locations for the repair of dug wells, rehabilitation of public health water supply schemes, construction of communal water reservoirs, and new and non-functional hand-pumps to be installed, constructedand/or repaired. This activity improved the programme response allowing it to prioritise areas that do not have safe drinking water available. The project also advocated for the treatment of drinking water (according to the baseline 84% of people in the targeted communities were not treating water). However, a majority of the people during the FGDs revealed that they were still not treating water. This was mainly because now most believed they have better provision of safe water, and even when they wished to treat water, they did not have the resources needed (e.g. filters) to treat water.

The programme made an exceptional effort to bring relief to women. Women were provided with the skills to install smoke free, environment-friendly stoves to protect themselves from the smoke that was causing many respiratory diseases, and increased their household work load. This initiative saw the installation and use of 1,007 smokeless stoves.

The latrine superstructures were constructed by the communities as per their desire. In many instances the superstructures were made of mud. The latrines proved to be of particularly great support to the women of the community. They mentioned how privacy had previously been a major issue, and oftentimes at evenings they would have to go in groups for open defecation. An important aspect to note is that the latrines have also been used by the community members, (including women and girls) as bathing spaces. While it is an added benefit, it might face some design flaws given that latrines are not made for bathing purposes. In the future, the latrines installed could be designed to include the fact that they may be used by community members for bathing and cater to issues like drainage of excessive or waste water.

The sanitation intervention also included capacitating the local masons and mart owners. Some of these mart owners have continued with the latrine construction supplies business as a result of participation in the project. During interview, it was revealed that a local vendor of Village Ghulam Murtaza sold 18 kits of latrine to other villagers who were not RDF's identified right holders and earned PKR 3,000. Individuals beyond the scope of the project were also being benefitted from the low cost latrine; and also, from health and hygiene sessions, such that they constructed their own latrines.

In another case, Noor Ul Din, a trained mason of the Village Mange Ladho (Thatta district) in this programme, constructed 15 latrines apart from the RDF latrines and which became his livelihood source. Now he has sufficient knowledge to purchase material at reasonable rate from the nearby market of Kotri. Overall, the sanitation interventions reduced the open defecation practice in the targeted communities by not only increasing awareness but also empowering the communities to self-sustain their WASH needs.

Picture 12: Meeting Sanitation Mart Owner

RDF's management also revealed that their approach to building communal latrines was useful given that the entire community could benefit from it instead of a single family. However, given the cultural sensitivities, it was important to ensure that the families sharing were related so that male and female family members could comfortably use the latrines.

Picture 13: Evaluation Team Observing Physical Water Quality Parameters

3.4 Sustainability

For measuring sustainability, the evaluation team looked into the various sustainability mechanisms that were in place to ensure the likelihoods of the activities to be continued.. The sustainability of each activity varied, depending on its design, implementation and nature. For example, the presence of O&M committee was likely to rehabilitate water points when the need for repairs will arise. While this indicates potentially high sustainability of the efforts, the evaluation team is still uncertain whether the right holders would be able to pay off any costs (contribution towards O&M fund is voluntary) that arise given their poor economic condition and limited means. At the time of evaluation field team visit these community water schemes mainly hand pumps were being maintained. For the larger water supply schemes rehabilitated under this programme is now taken over by the government (PHED) for O&M purposes. PHED receive district level maintenance funds which are then utilized for maintenance of the water supply schemes across the districts. PHED has already carried out required maintenance over some of the schemes rehabilitated under this programme. This shows good prospects of long term functionality of these larger water supply schemes which otherwise would have been difficult for the general community to maintain directly. However, it is important to note that tariff for these larger schemes are being collected by local government from the benefiting communities. Under the current approach, there is no linkages between the maintanence funds available with PHED and amount of tariff collected by local government. . Similarly, while toilets were present, because they were limited in number, it was observed that ODF and related practices were returning in some areas e.g. village Mage Ladho in Thatta district.

In the absence of continuous follow-up, it is also likely that communities may forget the messages transmitted related to hygiene promotion. Given the social conditions, the quality of water will continue to pose a challenge, especially in monsoon days when rain water from the surface may be mixed with drinking water. This said, NCA's activities will continue to benefit the communities, even though the scale may change. This has been made possible due to active community engagement. For example, the water points were completely managed by the communities – in terms of repairing them and taking care of the plant machinery. Hand Pumps are also being repaired by the communities who were also provided an orientation by NCA's team at the time of the installation. Community care and the easy availability of the spare parts of hand pumps also increased the likelihood of the hand pumps to survive for a longer period of time. Similarly, the larger water supply schemes taken over by the PHED are being maintained by the PHED. The staff from the department has shared that they have already carried out maintenance in case of some of the schemes where pump was damaged and the electric motor was burnt due to fluctuation in electricity. The concerned staff shared that to keep the water supply scheme operational they not only replaced the pump but also carried out winding of the electric motor. This arrangement will ensure long term functionality and sustainability of these public water supply schemes.

Picture 14: Water Storage Pond Constructed as part of the Programme

The active engagement of the community in the program initiatives, especially women and girls, will contribute to the long term utilization and O&M of the WASH interventions delivered under this programme. The O&M funds generation mechanism established through the village committees will further increase the long-term sustainability of the WASH infrastructure. The programme also builds the technical capacity (provided training) of the communities to ensure they are able to carry out maintenance as required. The programme also established linkages between the village committees and the concerned line departments which will also contribute towards the sustainability of the WASH interventions. However, the engagement with the line departments can be further strengthened by providing them more opportunities to engage in the programme activities, carry out field visits and interact with the communities and/or village committees.

3.5 Crosscutting Themes

This section includes details on approaches adopted for integrating DRR, gender and protection aspects in the WASH programme.

3.5.1 Gender and Protection

Besides ensuring involvement of women in the programme intervention the programme supported PWDs as well. The community's feedback confirmed that there was female presence and participation in the village committees. There were either mix committees where men and women both were represented or, as in a majority of the cases considering the cultural sensitivities, separate committees for females were established.. The women were largely engaged in the programme when it came to the identification of sites for provision of water or latrine assistance. In the programme intervention area women were primarily responsible for collecting the water and cleaning the latrines. Similarly, it was women who faced protection and privacy challenges when using open defecation especially at night. The water and sanitation facilities provided under the programme were appropriately situated considering the cultural and privacy needs of the women of these communities. Almost all the latrines were within the boundary wall of the cluster of houses. These latrines also provided a place for women and girls to bathe and maintain better personal hygiene. The availability of water points close-by helped

women and girls save some time and labour. The minorities living in the programme area were also included in the programme, if they fulfilled the eligibility criteria to become right holders. There was a significant number of minority villages in the programme. There was no discrimination noticed by the evaluation team e.g. exclusion of some households to fetch water from the water points provided or rehabilitated under the programme. The women also benefitted by using fuel efficient/environment friendly stoves constructed (by the community) as a sub-activity of this programme.

3.5.2 DRR

As discussed above, the hand pumps and latrines were constructed on raised platforms as applicable. This ensured that these hand pumps remained accessible in minor floods generated from heavy rains. In addition, voice messages on Disaster Risk Reduction were broadcasted on three local FM Radio channels of District Sanghar and Thatta, with the aim to improve awareness among the general public. To enhance capacity to cope with floods disaster, swimming trainings were arranged for children, a skill they could utilize regardless. These trainings were conducted by trained and experienced trainers. Furthermore, the Search and Rescue Trainings were conducted with the Pakistan Red Crescent Society. As part of these training, 336 community volunteers were trained on how to handle situations such as flood, fire, drought, heatstroke, snake-bite, and first-aid training, among others. Based on the discussions with the communities, they found these training very useful to their daily work.

3.5.3 Environment

For better environmental protection /management the types of latrines used were the pour flush type, connected to a septic tank. This ensured safe disposal of human excreta. Similarly, as a sub-activity, mainly led by the community themselves (with technical guidance and awareness from programme staff), the communities constructed fuel efficient cooking stoves. These stoves use wood as fuel. Therefore, with fuel efficient stoves less wood is expected to be consumed, reducing human labour cost and cost to the environment.

Picture 15: Environment Friendly Cooking Stoves Encouraged Under the Programme

The programme also conducted sessions in different villages to mobilize communities to plant trees and create social awareness about environmental hygiene. During discussions with communities, they informed the evaluation team that different types of trees including Neem tree, Jujubi Babbar, Soonhanjro (Moringa) were planted in schools, drainage points of hand pumps, and some other places.

3.5.4 Complaint and Feedback Referral Mechanism

There was an established complaint and feedback mechanism with multiple channels to provide feedback to the program's team. The community normally provided feedback during village committee meetings or to the sub grantee staff during the implementation or monitoring, and the NCA team also conducted field visit and asked for feedback. The programme also used customized web-based system, SHAFAF (transparent), to receive the complaints. In the system, once a complaint was received and registered, the system generated an automated SMS to the complaints committee and an acknowledgement to the complainant. During the literature review, it was noted that 332 feedback and complaints were registered on the beneficiary feedback mechanism during the course of the programme. More than 60% complaints were registered through phone. Most of these complaints were actually requests of WASH intervention in their villages (191), the others included requests of septic tank material (7) and requests to provide orientation on the smokeless stove construction (5). 37 complaints were registered about the vendors about unsatisfactory quality of material and late supply of material, and 69 complaints were registered on requesting separation of sanitation facilities. Normally the procedure to resolve complains took seven days during the course of the programme. The distribution of complaints is given below.

Table 6: Registration Mode of Feedback and Complaints

Registration Mode of Feedback and Complaints	District Sanghar	District Thatta	Total
Written	76	15	91
Phone	137	68	205
Through RDF staff	24	12	36
Total Registered Complaints	237	95	332

During evaluation, female FGD participants from Sanghar district mentioned that RDF's team collected feedback from them. They further shared that the male members of their families were given the contact numbers of RDF representatives for registration of any kind of feedback and complaint related to the programme. FGD participants of Haji Tayab Dars mentioned that there was a banner on which the registration methods of a complaint were printed. The General Secretary of the Haji Tayab Dars village committee in Sanghar district shared that they contacted RDF on phone to inform them regarding bad quality of construction work being carried out by the contractor related to WASH infrastructure built under the project. RDF team then raised this issue with the contractor and ensured that the contractor improve the construction work. This process helped resolve the community complaint.

Picture 16: Solar Motor Water Pumping Machine Provided as Part of the Programme

Section 4: Lessons Learned

The following are the key lesson learned:

- The NCA programme was implemented in the overall context of competing humanitarian priorities in the targeted districts as well as shrinking space for the INGOs in the country. The approach adopted by NCA allowed to successfully navigate both these challenges. NCA's partner was successfully able to gain and retain access through close engagement with relevant government offices.
- Access to beneficiaries, including women and minority groups in general, was not an issue. This allowed better engagement with women and minorities as compared to other parts of Pakistan including areas within Sindh, where access to these groups has been more limited. However, despite these achievements it was challenging for women to assume a more proactive role in the delivery of programme activities. They were generally reluctant and were asking the men in the community before sharing their own opinions. This reflects the need for more comprehensive community mobilization framework which may use men as agents of change for bring a behaviour change in women.
- The programme districts experienced frequent changes in government officials. This meant that the programme team had to re-start their conversation whenever there was a change. To cope with the situation, the programme team focused on second tier staff who were less likely to be changed frequently, however they had limited decision-making power.
- There were some area-specific challenges which affected programme implementation. For example, it was difficult to find a constant ground water source as water quality changed its quality with seasonal changes (e.g. in monsoon season or in dry seasons), and the water table often fell due to less rains in both districts. Similarly, in desert areas, communities also faced shortage of water for construction, where lack of sufficient water slowed down the construction of latrines. Waterlogging was also an important issue that affected availability of suitable sites for latrine construction. Such factors have to be considered in future designs.
- Although most of the programme staff was part of WASH programmes for years, it would add value to their knowledge if refresher workshop/trainings on Pakistan Approach to Total Sanitation and other related topics were to be conducted as part of this programme. Relevant government officials can also be invited to take part in these trainings.
- Water tariffs were introduced to ensure sustainable access to clean drinking for communities, however there were not many people who were willing to pay for water. This was mainly linked with low affordability and the possibility that in these communities safe drinking water was not prioritised over other economic needs. The engagement of local decision makers may positively affect this situation.
- Due to poverty and other related issues such as availability of space, not all beneficiaries were able to build a pits/septic tank for themselves.

Section 5: Conclusions and Recommendation

Based on the lessons discussed above, the following are key conclusions and their associated recommendations:

- The provision of communal Village level water supply scheme powered by solar system meant communities were able to use these water points without having any dependency on availability of electricity. However, this also increased the risk of overuse and over harvesting of water. It would be ideal to explore installation of water meters to regulate solar powered water supply schemes to reduce over extraction of water. It will help communities not to overuse water and will increase the efficiency of water usage. This should be added to awareness related activities to reduce over exploitation of already depleting water resources. The community should be oriented on efficient utilization of water when using it inside and outside the household. Carrying out ground water re-charge study can also be beneficial in assessing the actual situation and designing the interventions.
- The establishment of water management committees was a good step and helped with the management of water sources as well as their maintenance. There is a need to further invest in the capacity building of these committees. NCA may also like to explore inclusion of school teachers, elected members, as well as the staff of PHED in the committees. Their presence will help to further strengthen these committees, including the recovery of water tariffs. At the same time, even though interventions were not carried out in schools, the presence of teachers will help the committee to educate the younger generation regarding the importance of water, sanitation and hygiene in their villages and communities and why it is important to focus on these issues.
- As under-ground water quality is a major concern, NCA may want to explore potential innovative practices from similar contexts (e.g. Bangladesh for areas with high water table / high turbidity) to explore new ways to ensure provision of clean drinking water for the targeted communities.
- Engagement of women in the programme activities was an excellent idea. This helped these women to actively contribute to programme activities. In the future, the programme can explore other ways to build on the role of women by engaging them in additional activities, rather using them mainly for hygiene awareness and promotional activities.
- Support to the communities for the construction of household latrines using CLTS with subsidies helped these communities to increase coverage of latrines in the villages. At the same time, as the targeted households had varying amounts of space available in their homes, it was difficult for them to follow the size given in the drawing for the septic tank. In the future, communities may be allowed to adopt varying sizes of septic tanks based on the size of the plot available to the right holders. It will make these communities more likely to build a septic tank for themselves, will prolong the life of septic tanks, and will reduce the time taken to fill it. In addition, as latrines are also utilized for bathing purposes, especially by women and girls, it might be a good idea to consider bathing needs, and allow separate provisions for draining the wastewater generated through bathing activity in the design as well. Finally, before constructing a combine latrine, the implementation organization must

take a written consent from the families to avoid any dispute in the future such as demanding separate latrine or excluding a family from using the facility.

- Even though some collaboration took place with the relevant departments, there was more space to further strengthen engagement with the government departments. Linkages can be further strengthened with line departments by providing them more opportunities to be involved in the programme activities. For instance, the implementing organization must take technical input on hand pumps and latrine designs and types, as well as their interaction with the communities and/or village committees. As part of the capacity building measures it will add value if training and relavent capacity building activities can be organised for RDF and government officials.

Picture 17: Water Tank Constructed as Part of Solarisation Initiative