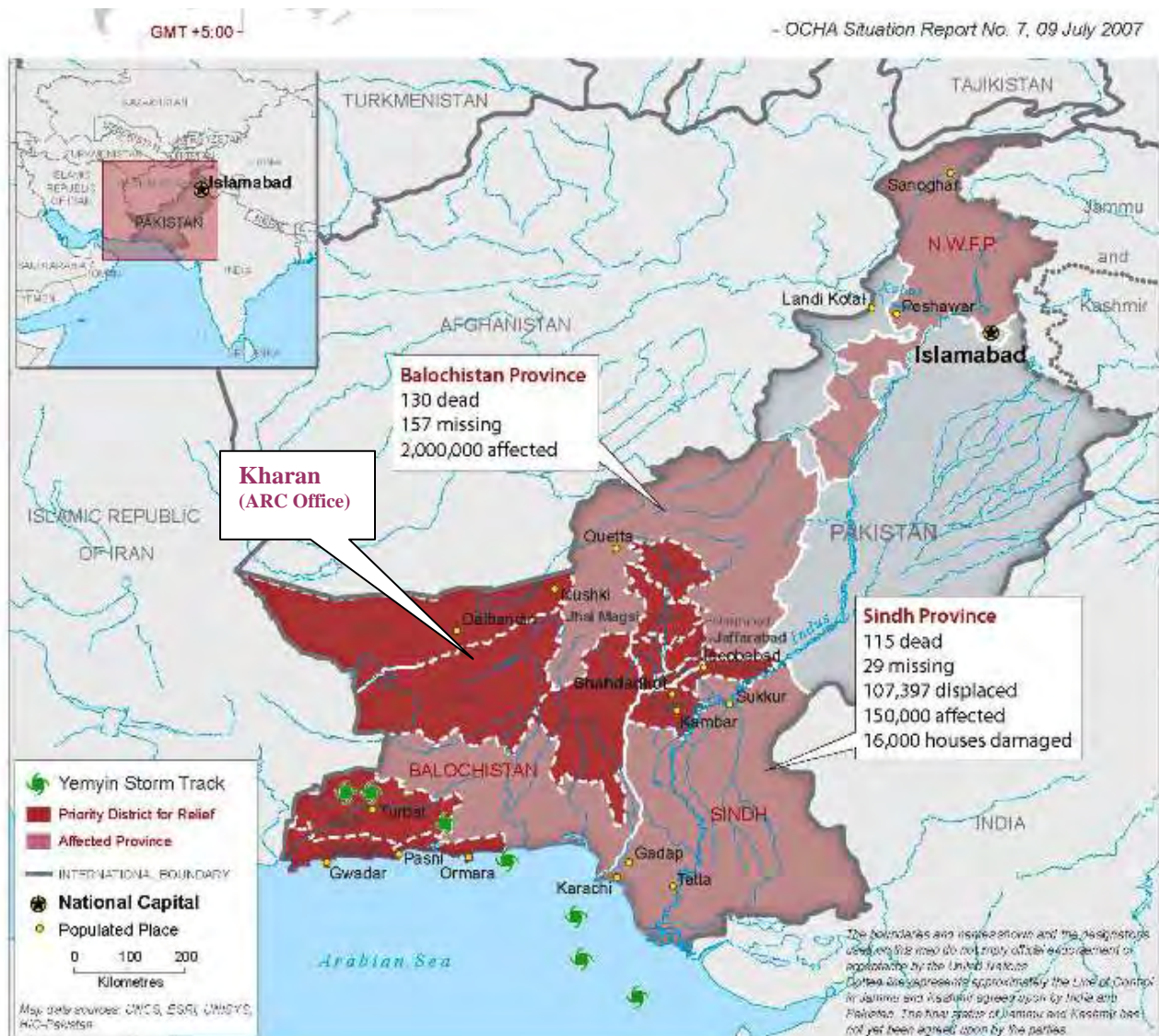


Project Completion Report

ARC-OFDA Shelter Project District Kharan, Balochistan, Pakistan

March 2008



Contents

I.	Executive Summary.....	3
II.	Background.....	4
III.	ARC Response and Assessment Summary.....	4
A.	ARC-OFDA Shelter Activities.....	5
	Project Implementation Process.....	5
	a. Shelter Needs Assessment.....	5
	b. Shelter Material Identification.....	5
	c. Shelter Material Procurement.....	6
	d. Transportation.....	6
	e. Distribution.....	6
	f. Construction.....	7
	g. Cash for Work.....	7
	Achievements/ Constraints Encountered.....	8
B.	ARC-OFDA Water & Sanitation and Hygiene.....	9
	a. Social and Technical Survey.....	9
	b. Formation of Village Committee.....	10
	c. Cash for Work.....	11
	d. Rehabilitation/Reconstruction of the Water Resources.....	12
	<i>Reconstruction of community water supply schemes.....</i>	<i>12</i>
	<i>Hand pumps and wells.....</i>	<i>13</i>
	<i>Latrines.....</i>	<i>13</i>
	<i>Windmills.....</i>	<i>13</i>
	<i>Karez Project.....</i>	<i>14</i>
	e. Conducting Community Hygiene Sessions.....	15
C.	Constraints.....	16
	a. Security Situation.....	16
	b. Difficulty in Supply Delivery and Transport.....	16
	c. NOC Obligations.....	16
	d. Limited Timeline.....	16
	e. Topography and Climate.....	16
	f. Unavailability of Supplies.....	16
	g. Cultural Limitations.....	17
D.	Conclusions.....	17
E.	Progress against the Proposed Indicators.....	18

Executive Summary:

Headquarters

American Refugee Committee
430 Oak Grove, Suite 204
Minneapolis, MN 55403
Tel: 612/872-7060 Fax: 612/607-6499
Alex Erolin, Regional Manager
alexe@archq.org

Pakistan Office

ARC Pakistan
House # 4, Street 14-A, F-7/2
Islamabad, Pakistan
Tel: +92 51 2654101-3 Fax: +92 51 2654104
Louise Paterson, Central Asia Regional Coordinator
arcentralasia@yahoo.com

Country/Region:

Balochistan, Pakistan

Submission Date:

March, 2008

Program Title:

Emergency Shelter and WASH response
to cyclone Yemyin Flood-Affected
population of District Kharan and
Naushki, Baluchistan

Program Duration (number of months):

6.5 months

Proposed Start Date:

August 1, 2007

Dollar Amount Requested from OFDA

\$ 750,000

Program Goal: To address the essential needs of recent flood affected communities in Balochistan, Pakistan through a multi sectoral, integrated program comprising of emergency shelter and water, sanitation and hygiene (WASH) activities.

Total Number of Individuals targeted by ARC in the Affected Area:

20,000 beneficiaries (2,000 families) in Jodai Kalat, Jamak, Tomulk and North and South Kharan Union Councils, in District Kharan, Balochistan (SHELTER)

100,000 beneficiaries (10,000 families) in Union Councils, Jamak and North and South District Kharan Union Councils in District Kharan and City 2 and Jamaldini Union Councils in District Naushki, Baluchistan (WASH)

Background

Between the end of June, July, and throughout August 2007, intense storms and a major cyclone (Yemyin) followed by Monsoon showers engulfed Pakistan, and brought an acute disaster in Balochistan and Sindh Provinces. Intense storms caused severe flooding in Pakistan, displacing an estimated 800,000 populations and affecting over 2.5 million people with 280 confirmed deaths and a further 188 missing. As of 23 August, 2007, the National Disaster Management Authority (NDMA) reported that total death toll reached to 420 (205 in Balochistan) with 224 persons missing. The flooding spread to 18 districts in Balochistan and five districts in Sindh with following monsoon season which ended in middle of August, 2007.

Due to floods and Cyclone, 23 districts were affected in provinces of Balochistan and Sindh out of which 18 affected districts are in Balochistan. Total 10 districts were classified as highly affected out of which 8 fell in the Province of Balochistan including Awaran, Jhal Magsi, Naseerabad, Jafferabad, Bloan, Kech, Kuzdar and Kharan while 2 districts in the Sindh province including Dadu and Kamber. Overall 7 districts got mildly affected including Gawader, Washuk, Chaghi, Noshki, Kalat, Mastung, Lasbele while the affected ones include Sibi, Qilla Abdullah and Panjgur.

Floods caused havoc as heavy quantity of water diverted to the residential areas ruining towns and villages, which resulted in heavy loss of lives and housing stock, crops, food stocks and livestock. Flood affected people left their homes and saved their lives as they took shelter in government buildings, schools, and Mosques. Many of the families left to other districts. These people completely lost their domestic assets and many spent day and night without any food and appropriate shelter. All communication sources (telephone, roads etc) lied defunct while electricity was also not available. Many villages are lashed due to heave floods as A Dam “Arri Kalag” broke down as well.

ARC Response and Assessment Summery

The floodwater “Kullan” diverted in the centre of Kharan city and about 7 union councils in the rural areas and destroyed more than 70%¹ houses in Kharan District. ARC International rushed a team to carry out rapid assessment survey of Kharan district, Balochistan. The presence of ARC in Balochistan since 2002 and in the most challenging Himalayas of Bagh after the earthquake 2005, significantly contributed to build a team of experts who had years of experience in emergency management, camp management, emergency water and sanitation management and most of all emergency health management. Their expertise was built during the influx of Afghan Refugees in Balochistan, managing the largest refugee camps with a population of over 80,000 inhabitants and life saving services to the desperate, vulnerable people of the earthquake disaster.

ARC’s initial assessment was conducted by team comprising on an Emergency Response Coordinator/Security Coordinator, Senior Operations Officer, a Senior Technical Manager, Project Manager and a Program Assistant in the team. The team went in each village to measure the toll of devastation caused by the floods. The initial detailed damage assessment was completed in a week and data was available with the team to submit proposal and layout the project plan in cooperation with OFDA/USAID.

¹ UNDAC Report- 12th July 2007

A) ARC-OFDA Shelter Activities

The generous support of the American people through Office for Disaster Assistance OFDA-USAID enabled ARC to distribute immediately needed shelter packages among 2000 families in District Kharan. Keeping in view the basic needs of the affected population, ARC came up with the complementary solution of employing a team of 36 carpenters to construct 400 which later increased to 711 shelter units for extremely vulnerable families comprising widows, orphans, female headed households and elderly people identified in Jamak, Jodai Kalat and Tohmulk union councils of District Karan.

Project Implementation Process:

a. Shelter Needs Assessment

The assessment survey was conducted to calculate damage rate of the households, to ascertain most affected villages, to identify EVIs, and assess damage on the mud houses of the local people. With assistance of Balochistan provincial and local government, coordinating NGOs and local community, ARC was able to carry out a detailed door to door assessment in the 5 target union councils of Kharan district and calculated the population to be approximately 144,600 individuals with an average of 8-10 per family. The shelters were classified either as fully damaged or partially damaged. Fully damaged houses were with substantial structure damages i.e. walls and roofs washed away due to flood waters, and houses with cracks appearing in walls and roofs of the standing houses lied under the category of partial damages.

Union Council	Total Households	Fully Damaged	Partially Damaged	No Damage	Displaced
Jodai Kalat	3,671	940	1,693	1,128	10,000
North Kharan	4,500	1,350	---	---	5,000
South Kharan	4,250	1,062	1,700	1,488	---
Tohmulk	3,062	612	245	2,205	10,000
Jamak	2,500	750	375	1,375	---

b. Shelter Material Identification

The contents of the ARC emergency shelter unit package were determined with reference to the Sphere shelter standards and in particular, weather resistant, culturally appropriate, safe, and adequately accommodating 8-10 members. According to SPHERE standards and guidelines, a typical household would comprise of 6 people, however, keeping in view the population of Balochistan, official statistics, assessment reports, Shelter and WASH Clusters, a typical household in District Kharan comprises of 8-10 people per household. The emergency shelter packages comprised of wooden mash/ mattress (locally called Khaira), bamboo poles, plastic sheets, cotton rope, flooring mat, jerry cans, buckets, saw, nails, hammer, and shovel. Following is the detailed breakdown of the shelter package distributed among 2000 families:

Wooden Mash/ Mattress	Bamboo poles	Plastic Sheet (sq/m)	Cotton Rope (meters)	Flooring mats	Jerry cans	Buckets	Saw	Nail (grams)	Hammer	Shovel
16,806	28,100	24,084	72,000	3,874	4,356	4,033	2,000	900,000	2,000	2,000

Household structures were designed together with the community and were kept fairly simple to be erected and traditional in construction. The shelter packages were handed over to the head of the

household who would construct the houses themselves. The houses were built with local available materials like mud bricks, mud walls, iron girders (Iron Beams) bamboos, wooden mats (Khaira), plastic sheets and clay. In some cases 1'x" bricks tiles with cement mortar have also been used. Construction of a typical house took 7 to 20 days, depending upon the size of the family and number of rooms required. The local people had indigenous knowledge of construction of typical houses and were easily available for construction labor. The total cost of the comprehensive shelter kit was approximately \$130. The shelter items provided salvage to the ruined structures and could be recycled in the new long term shelter construction.

c. Shelter Material Procurement

ARC Procurement team faced great difficulties in identifying and purchasing the shelter material purely because the intensive and rapid response to the floods by the INGOs, local NGOs, Government of Pakistan, resulted in creating a great demand for shelter material. Following the approval, ARC Procurement Team managed to locate and procure the required quantities of shelter construction items locally from Quetta city and few other items like Khera and Bamboos were procured from other parts Sindh and Punjab provinces of Pakistan.

d. Transportation

The transportation of the shelter material was the main challenge for the distribution teams, given the poor road conditions almost completely washed away, desert area, unavailability of the transport vehicles and unfamiliarity with the desert drive. ARC received logistical assistance from UNJLC who provided 91 trucks and transported the shelter supplies to Kharan and subsequently in the target villages.



Difficult desert drive



Transporting shelter material



Supplied loaded on trucks

e. Distribution

ARC distributed 2000 emergency shelter packages identified in the initial need assessment conducted in collaboration with team from Islamic Relief International. ARC devised a strategy to distribute shelter packages to the affectees of the floods, with special focus on those located in more remote, far flung areas. To carry out the shelter distribution, three distribution teams were formed, each headed by a leader, who initially met with the selected influential members of each Killi (village) of the target union councils. With the help of the leaders from local communities, ARC distributions team further formed the village organizations (VOs) and identified the beneficiaries. Distribution of the 2000 shelter package was completed in 35 days, and tokens were issued to each recipient family.



Shelter stock in warehouse



ARC-USAID Shelter kit



Shelter unit packages

Distribution teams formed packages of shelter units comprising on wooden mash, bamboo poles, plastic sheets, cotton rope, flooring mat, jerry cans, buckets, and a tool kit. With the community participation, distribution points were identified in 4-5 villages which were easily accessible to the village people, however, village wise nucleus points were also formed for the people residing in the far off villages. At the time of distribution, the team put up a shelter unit for the demonstration on how the shelter unit would be built so as the families could erect their shelter houses themselves. ARC also distributed 436 shelter units provided by UNHCR to 376 families in District Naushki by the end of first week after the floods hit the province.

f. Construction

Construction of the shelter units was the important objective of the Shelter Program and it was a great challenge because of the scarce availability of the skilled, construction material, hot and dry weather (45 C to 48 C) ARC Shelter team identified Extremely Vulnerable Individuals with the help of village committees and families and distributed 2000 emergency shelter. ARC initial assessment revealed that many households in the target union councils consisted on extremely vulnerable individuals i.e. female headed households, disabled, widows, orphans, elderly etc. who could not built their own shelters. The teams collaborated with communities and heads of the families and hired local carpenters to erect the shelter initially for 400 identified vulnerable families. The construction of the shelter houses was carried under the cash for work program. Following the completion of target construction in the area, ARC's shelter team was in the area and constructed an additional 311 houses in Kharan District construct ring a total 711 shelter units for the EVIs.



Team constructing shelter house



ARC-Shelter unit model



Comprehensive shelters village

g. “Cash for Work Program”

ARC hired engineers, carpenters, skilled and unskilled labors for the construction of shelter houses for the extremely vulnerable families in the 3 union councils. ARC hired 36 carpenters and 1360 labors from the local communities under the ‘cash for work’ program. The formation of village committees was a great help for the cash for wok program. The community elders were nominated in each village who would oversee the attendance and performance of the people hired for work. They were trained and skilled labor and constructed houses for those who could not built the houses for themselves.

Achievements, constraints encountered

Planning	Target	Constraints	Achievements
Distribution of shelter packages with 11 items present in each	2000 families to be covered from 8/8 2007 to 31/8 2007	Shortage of material in local market and high prices of the material available	Were able to complete the targeted distribution in 35 days to all three districts and 2000 households.
Transportation of shelter items	Shelter packages comprising on 11 items for 2000 families	Poor road conditions, unavailability of trucks, unfamiliarity. Mostly the trucks are involved for the transportation of fruit from Balochistan to other provinces.	UNJLC provided 91 trucks for 19 days to transport the materials at site.
Construction of shelter houses	400 shelter houses for EVIs	Identification of EVIs, availability of salvaging material, sever dry and hot weather	The local village committee members assisted ARC staff to identify the EVIs in local villages in the target UCs. Started construction with the local people, heads of the families who were well eloquent with construction of mud houses for 711 families. Initially 400, and 311 later identified on need basis.
Hiring of distributors	12 Distributors	The services skilled and trained distributors were not easily found.	Hired interceded and energetic local young men from Baluchistan and deployed on job training with experienced team leaders under the direct supervision of our experience engineers
Hiring of senior staff	Senior managers	The local experienced personnel were not available to run the project	Hired services of senior and technical staff from Bagh who already had experience of emergency response in Earthquake Disaster 2005.
To control the outbreak of diseases	In the target union councils of Jamak, Tohmulk, and Jodai Kalat	Outbreak of diseases like diarrhea, skin diseases (scabies and rash), malaria, fever, eye infections and malnutrition etc.	ARC mobile health team comprising on a doctor, a vaccinator, one LHV, hygiene promoter and a dispenser was immediately deployed in the target UCs to cope with the emergency situation. This further included 20 Community Educators

B) Water and Sanitation and Hygiene

Balochistan Province had a weak infrastructure in regards to drinking water supplies, drainage and the sewage pipelines. The main sources of water are tube wells, windmills, hand pumps, wells, community water supply schemes, and Karez. Karez is an underground source of water and widely used in Kharan district. As the floods approached the water resources particularly the Karez, they got badly affected and collapsed leading to contamination of the whole water system. The ARC assessment teams reported that the main source of water supply in Kharan district was a perennial Karez system which was found deplorable in the aftermath of disaster.

In 1998 World Bank had completed a Water Sanitation Project in the region but it could not sustain to its fullest due to lack of maintenance. The Public Health Engineering Department (PHED) was also managing 9 water supply schemes in the district. People had also dug up 200 shallow wells out of which 80% had been completely damaged leaving local people with no means of clean drinkable water provision.

In view of the poor water and sanitation situation, ARC entered into a Project Cooperation Agreement (PCA) with OFDA/USAID to respond to the needs of the affected people. The ARC-OFDA Water and Sanitation and Hygiene Project was a key element in ARC's multisectoral approach to combat the disaster eruption and normalize the life for survivors. The WASH project was launched in August 2007, and through out the project duration, ARC received continuous support from UNICEF in the reconstruction and rehabilitation implementation of the water resources.

a. Social and Technical Survey

ARC WATSAN team conducted survey to assess the damages in the existing water system. The ARC Social Organizers, Hygiene Promoters, and Field Engineers collected data for a social and technical survey during the emergency phase for the identification of water supply schemes in need of rehabilitation. The survey team handled the physical assessment through random sampling, direct observation, conducted 600 semi structured interviews in five union councils, held key informant interviews with the local government representatives, Focus Group Discussion (FGDs), and contacted other international organizations and government agencies like NDMA and UN to help gather the on-ground situation to respond to the emergency

After the survey, the ARC Field Mangers compiled a comprehensive data of the destroyed and damaged water resources. Depending upon the population size, available water resources, and the PCA with OFDA/USAID it was decided that under the 'cash for work' scheme the team will be digging pits for 800 latrines, cleaning and digging of 75 wells, replacement of fully damaged hand pumps and windmills, excavation and complete rehabilitation of a Karez, and provision of water through tankering. Besides the major repair and reconstruction activity, the essential health and hygiene education program was taken into account along with distribution of water purification supplies.

ARC applied for No Objection Certificate from NDMA and Provincial Disaster Management Authority (PDMA). Initially the government issued NOCs for five water supply schemes but later on ARC was allowed to reconstruct another two schemes to fulfill water needs of 74,600 people in the Kharan District.

Initial Survey on Damages:

Union Council	Tube Well	Well	WSS	Karez	Hand Pump
Jodai Kalat	---	3 wells completely destroyed	No water supply schemes	No Karez system	7 hand pumps were destroyed, needs 23 more hand pumps
North Kharan	3 out of 5 tube wells were destroyed, total tube wells required for the people were 5	---	No WSS was available, required 1 WSS	One existing Karez was also damaged and needed reconstruction	---
South Kharan	---	3 out of 5 wells were destroyed and needed to be repaired	No WSS was found, two WSS were recommended for the UC	No Karez	10 hand pumps were damaged, and besides reconstructed of existing 10 hand pumps 5 new were also required
Toumul k	---	4 destroyed	---	One damaged Karez	4 hand pumps were destroyed and needed 6 more
Jamak	---	3 damaged	---	---	7 hand pumps were destroyed and they need 23 more hand pumps

This was the very initial survey conducted by the teams immediately after the floods. As the teams got aboard and were on way to the shelter distribution, construction and restoration of damaged drinking water supply resources; they came across more damages in the water resource infrastructure and managed to work altogether on the newly identified destructed wells, wind mills, hand pumps, Karez and water supply schemes. The following table shows our achievements against the set goals under cash for work program:

b. Formation of Village Committees

After the approval from the Government, ARC staff completed the village profiles on the basis of initial visits and dialogue with the target community. The project team organized community meetings at the village level and introduced the purpose of the WES project and ARC's objectives and goals. The community initiated resolution for being agreeing and formulating a community-based Village Committees (VCs) which became a partner organization on behalf of the target community of the project.

To be appropriate with the cultural settings, ARC formed 55 Water Management Committee, 7 for the Community Water Supply Schemes, 37 for hand pumps, 10 for windmills, and one for Karez. These Village Organizations were responsible for arranging and informing their communities about upcoming training sessions and distribution of hygiene items. These VOs further developed essential

linkages with all the stakeholders and formed a sub-committee and Water Management Committee (WMC) to coordinate with the ARC WES project team for timely and quality implementation.

Project Progress

No.	Activity	Identified	Remarks
1.	Shelter package distribution	2000	Distributed complete shelter packages to 2000 families in Kharan. Packages included bamboos, wooden mattress, plastic sheet, flooring mat, jerry cans, buckets and a tool kit.
2.	Shelter Construction	711	The team initially decided to construct shelter houses for 400 poor families but they identified another 311 EVI families, and constructed a total 711 shelter houses under the cash for work scheme.
3.	Pit digging for latrine	800	Constructed 800 latrines in Kharan. Under the cash for work scheme the pit digging for 800 latrines was completed and later the latrines structures received from UNICEF were installed.
4.	Cleaning of existing and digging on new wells	75	Team identified some of the standing wells with damages which were repairable. We clean the damaged well and dig new where needed. Total 75 wells were either constructed or cleaned.
5.	Rehabilitation/ installation hand pumps	67	37 existing hand pumps were rehabilitated and a 30 new were installed.
6.	Rehabilitation/ installation of wind mills	10	Rehabilitated 10 and installed 7 new windmills.
7.	Restoration of CWSS	7	ARC initially received NOCs for reconstruction of 5 water supply schemes, later NOC for another two schemes were awarded to ARC.
8.	Excavation/ rehabilitation of North Kharan Karez	1	3 channels of a collapsed Karez were excavated and completely restored as the water has poured out in abundance.

c. Cash for Work

Throughout the project, a total of 1,360 labors were hired and trained by ARC under the ‘cash for work’ program to execute the water and sanitation rehabilitation activities. The labor was hired through the local female community who agreed to labor against the cash for work and started digging 800 latrines and 75 wells in the 3 union councils. The cash for work is the best program to help the communities by providing them cash against their services in a recovery program.

Management of CfW: ARC team got in touch within the first week of floods approached Baluchistan Province, and managed to develop a good understanding with the community and the WATSAN needs of the area. The staff using the participatory techniques conducted discussion with the communities and also kept the gender sensitivity aware and ensured. There was an equal opportunity for women to participate and get rewarded against their services. The pit digging for latrines did not require technical and skilled labor hence the village men and women worked against cash payment. A 10ft unit was allocated to one latrine pit and two labours per household (one male – one female) digging a pit in five days time. Total 1600 people worked under the CfW program and completed the pits for 800 latrines. Side-by-side the work on installation of latrine structure was started.

The appointment of labor was carried through a pre-assessment of the people willing to labor against pre-agreed cash for their services. The elder of each village voluntarily supervised the cash for work activities, the daily labor attendance, and daily work progress. Where the ARC Engineers supervised and monitored the overall work progress.

d. Rehabilitation/Reconstruction of Water Resources

The project was aimed at saving and improving the quality of life by reducing disease by using water purification material, reconstruction and rehabilitation of existing water resources which were brutally wiped out in the floods, and conducting hygiene sessions for the community.

Due to massive destruction in the floods, many survivors were forced to defecate in the open which endangered serious security risks for women and major health crises for the entire community. The survivors and their domestic animals were found to be drinking water from the same ponds. The sequels of rainfalls added more to the vulnerability of the affectees leading to the outbreaks of severe diseases. With the help of OFDA grant, ARC was able to quickly grab over the worsening situation and help restore the survivor’s basic drinking water and sanitation needs through repair and maintenance of hand pumps, wind mills, wells, and water supply schemes.

ARC initially identified to reconstruct and rehabilitate 75 wells, 11 wind mills, 50 hand pumps, and 5 water supply schemes in 3 union councils; however the need for reconstruction works slightly differed from the initially assessed damage as the teams got in touch with the repair work on ground. By the end of project, ARC has rehabilitated 75 wells, 17 wind mills, 67 hand pumps and 7 community water supply schemes in 3 union councils: Jamak, Jodai Kalat, and Tomulk. Moreover, we installed 22 pillow tanks in the beginning as no other water resources were wells, wind mills, and hand pumps had been the major sources of supplying water to the communities before the floods came. The WATSAN team visited the villages to estimate the damage, the design, material and labor required, and the approximate time line. Once the Village Communities were established and Terms of Partnership were agreed, teams initiated working on the rehabilitation and reconstruction of the damages.

Reconstruction of Community Water Supply Schemes: ARC survey team found a need of 11 community water supply systems as almost all water resources were completely damaged in the district Kharan. We initially got NOCs for the reconstruction of 5 CWSS but later ARC was issued No Objection Certificate for another two water supply systems in the Kharan district. After the Terms of Partnership (TOP) were signed, feasibility study completed, and NOCs in hand, ARC initiated the step-wise physical rehabilitation of the 7 water supply schemes.

1. Technical survey
2. Preparation of estimate
3. Restoration of engine and turbine
4. Trench digging for pipe laying
5. Laying of pipe
6. Repair of all water tanks connected with engine.

No.	Village Name	Target	Achieved
1	Jamak	1	1
2	Masset	1	1
3	Dano 1	1	1
4	Dano 2	1	1
5	Hurrao	1	1
6	Naro	1	1
7	Sistag	1	1

With the help of technicians, engineers, plumbers and labours ARC restored 7 CWSS successfully and clean drinking water is available to 12,500 people in the following villages:

Hand Pumps and Wells: The plan was to repair existing hand pumps and install entirely new where the existing hand pump is not in repairable condition. ARC repaired 37 and replaced 30 hand pumps. Similarly, some wells were found with comparatively lesser damages and were cleaned up, the digging of new wells was done under the cash for work program. Depending upon the amount of damage, the team worked on 75 wells in the target union councils.

Following is the village-wise detail of the repair of hand pumps:

No.	Hand Pumps Repaired			Hand Pumps Replaced		
	Village name	Target	Achieved	Village name	Target	Achieved
1.	Dao Shaeed abad	3	3	Dao Shaeed abad	1	1
2.	Goram loop	1	1	Ladhgasht	2	1
3.	Ladhgasht	1	1	Dazo	1	1
4.	Rakho	1	1	Mir Musafir Popate	1	1
5.	Tondai	1	1	Kuttan	3	3
6.	Zorabad	1	1	totazai	4	4
7.	Rozzai	4	4	Garuk	1	1
8.	Totazai 1	7	7	Dur Mohammed Porpate	1	1
9.	Totazai 2	2	2	sopak 2	1	1
10.	Sharif Abad	1	1	Sopak 1	1	1
11.	Abdul Kareem But	1	1	Noor Mohammed But	1	1
12.	Ghulam Nabi	1	1	Kamal Khan Darich	1	1
13.	Sargulzai Khouk	1	1	Patey sir	1	1
14.	Saeed abad	1	1	Abdul Khaliq But	3	3
15.	Abdul Khaliq But Bashir Ahmed	4	4	Sargulzai	1	1
16.	Abdul Kareem Rahceel	1	1	Gulam Ali But	1	1
17.	Kitto	1	1	Dado zai	2	2
18.	Jhal khouk	2	2	saeed abad	1	1
19.	Nazarzai	1	1	Naronki	1	1
20.	Minab	1	1	Zayan	1	1
21.	Khuttan Bashir Ahmed	1	1	Bashoor	1	1
Total		37		Total	29	

Latrines: After the survey, ARC team identified sites for construction of 800 latrines. The selection of the sites was made in a way that a latrine is approachable by three families. For the provision of improved sanitation facilities to 14,920 people in the target union councils of the Kharan district. The latrine structures were received from UNICEF. The pit digging was completed under the ‘Cash for Work’ program (CfW) funded by USAID-OFDA. The CfW program was an equal opportunity for the communities affected in the target union councils for providing cash as a recovery program.

Wind Mills: As per ARC’s initial assessment, 17 wind mills were found to be severely damaged and needed repair. ARC installed 7 new windmills in the target villages, while 10 out of the total damaged windmills were relatively repairable and were repaired successfully by the ARC Technical team.



Windmills installed by ARC

Windmills Repaired				Windmills Replaced		
No.	Village Name	Target	Achieved	Village Name	Target	Achieved
1.	Ladhasht	1	1	Shaeed Abad	1	1
2.	Jhal Khouk	1	1	Baddo Khubdani	1	1
3.	Porpate	1	1	Salam Dazo	1	1
4.	Totazai	2	2	Abdul Kareem Raceel	1	1
5.	Musafer Purpate	1	1	Attaullah Ajbari	1	1
6.	Zor Abad	1	1	Khuda Buksh raceel	1	1
7.	Kucho Loop	1	1	Saeed Abad	1	1
8.	Nali	1	1			
9.	Gazi	1	1			
Total repaired			10	Total replaced		7

Karez Project: Karez is an underground water system and one of major and commonly used source of obtaining water in Baluchistan and in Kharan in particular. ARC found a 300 years old but completely collapsed Karez in the North Kharan area. The team took it as a challenge to restore as the water coming in from this source was serving to 45% of the Kharan city population. A team of 4 technicians and two field engineers under the supervision of Senior Technical Coordinator completed the feasibility survey of the site in the first two weeks of the floods and found that if restored the Karez would provide a water solution for 18,000 people in North Kharan.



After the survey, the excavation of the channels was initiated with the help of excavator. The main branches in north, west and east were of 1150ft, 700ft, and 300ft lengths respectively. The excavated land consisted of shingle, gravel, compacted and soft land and hard rocks. The breadth of all main branches varied between 2ft to 8ft and depth from 8ft – 16ft. Due to the varied classification of the land types, the excavator faces problems because it was impossible for excavator to break hard rocks and equally difficult to excavate soft soil as the sides would slide down inside the Karez.

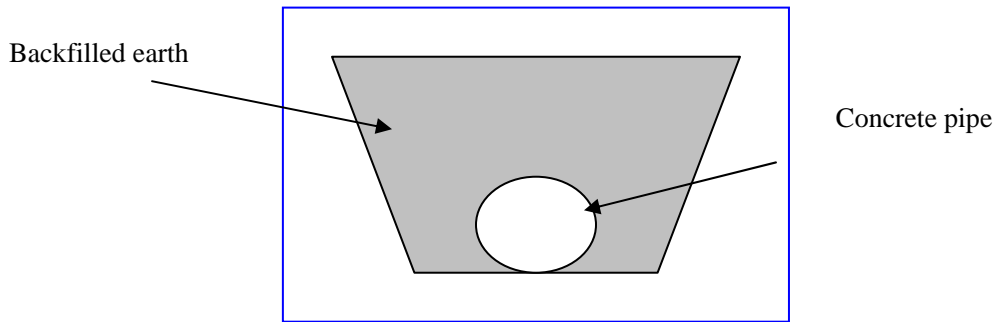


To achieve the required level, manual labor were assigned task to obtain maximum discharge of water. With achieving required level, Karez was opened for North Kharan communities directly benefiting 3,250 people. 820 Reinforced Concrete pipes 2ft dia, and 6ft length were procured and laid with the

help of loader. During pipe laying 35 manholes were constructed with concrete blocks, cement and bricks, procured locally from Kharan.

After the completion of pipe laying, backfilling of the excavated channels were initiated with the help of tractors. The Karez has been completed successfully and clean water is available to the people of Kharan.

Karez Cross Section



e. Conducting Community Hygiene Sessions:

Due to lack of quality education and health knowledge in Kharan, many survivors were unaware of the dangers of poor personal hygiene. Water shortages due to destroyed water supplies and unavailability of soap decreased the survivors’ ability to maintain good personal hygiene and defend against the skin diseases such as scabies and others as diarrhea. ARC promoted the importance of personal hygiene and behavior change through community hygiene sessions. For this purpose ARC proposed to provide health and hygiene education to a 74,600 beneficiaries either through hygiene session or distribution of leaflets. A team comprising of 11 Hygiene Promoters visited the villages of each union council to survey the health and hygiene conditions on ground. The hygiene promotion teams subsequently conducted 245 hygiene sessions which were attended by 2370 male, 2192 female and 1537 children participants. The ARC mobile health team held medical camps in the target villages and set hygiene corners to educate the people on personal hygiene, diarrhea prevention, clean water and food hygiene and these messages reached to an approximate, above 50,000 population and distributed 1000 Neurox filter and 384,000 aqua tabs for water purification.

Aside from the promoting behavior change on personal hygiene, ARC distributed the tools necessary for making the improvement for beneficiaries across the three union councils. ARC received in-kind contribution from UNICEF in from of winter kits, hygiene kits, water filters, jerry cans, toilet and washing soaps and water collecting utensils. The detail amount of distribution is as follows:

In-Kinds received from UNICEF							
Winter Kits	Hygiene Kits	Nurox Water Filters	Aqua tabs	Collapsible Jerry Cans	Plastic Jerry Cans	Toilet Soaps	Washing Soaps
280	1850	1000	384,000	3450	300	50,000	40,000

C) Constraints

Security Situation: As such no security issues were reported by the humanitarian communities on ground. ARC teams found community cooperation in regards to assessment and while carrying out the rehabilitation activities. There are often disputes among host tribes and influential political parties; however no incidences of exploitation were accounted particularly in Kharan district since the time of floods broke in.

Difficulty in Supply Delivery and Transport: ARC policies include identification of vendors according to policies like bid announcement, short listing, sample selection, purchase order delivery and receiving of inventory, to ensure transparency. The season of fruit ripening has been another cause for unavailability of trucks as large number of trucks was engaged in moving the seasonal fruit (apples, grapes etc) to other cities of the country leading to delays in supplies.

NOC Obligation: To attain an NOC for every project was a requirement which had to be fulfilled before starting work in the field. This was to be provided by National Disaster Management Authority (NDMA) and by Provincial Disaster Management Authority (PDMA). There was an early confusion on whether an agency required NOC from one or both of the organizations. This resulted in delays of starting many WASH schemes which would have been completed on time otherwise. Initially, PHED was agreed to have partnership with ARC on rehabilitation and reinstallation of 11 community water supply schemes. But PHED received pipelines from UNICEF and planned to repair and restore 6 damaged water supply schemes in the most affected union councils of the district. Later on the provincial authorities allowed ARC to start reconstruction and rehabilitation work on 5 CWSS in the target union councils. ARC got issued a NOC from the provincial government after 7 to 8 weeks and then initiated with the work on ground.

Limited Timeline: The Shelter and WATSAN teams had 35 days to transport and distribute 2000 shelter packages and construct 711 shelter houses in Kharan. Further, the time limit and weather conditions gave a tough time to the teams digging 800 latrine pits, rehabilitation and construction of wells, wind mills and replacement of the hand pumps. Also the working hours were shortened due to the juncture of the month of Ramazan and majority of labor going on holidays for Eid.

Topography and Climate: Much of the Balochistan Province is sparse desert terrain with pockets of inhabitable towns. Summers are extremely hot and dry and winters are equally harsh. Specially in the Chaghai and Kharan districts, the occasional strong windstorms would make these areas very inhospitable. The temperature in the day time rises as high as 120 F (50 C), and in winters drops even below – 5 C causing the major difficulties in transportation, distribution and construction of the shelter houses. The winter season falls in end of October which is freezing in the mid November and become incapacitated towards the field activities. There was a dire need of warm clothing, stoves, and burners for the staff in field so they can keep themselves warm and the activity is not disrupted by the chilling weather.

An intense cold wave gripped the entire region causing severe rain and heavy snow falls. In last week of January, Northern parts of Baluchistan received fresh spell of heavy snowfall which covered major highways towards Punjab, Sindh and Iran. The team faced great difficulties while working on ground due to the very cold weather.

Unavailability of supplies: Because of the sudden influx of organizations aiming to rehabilitate the damages occurred in the aftermath of floods, the procurement teams found short market for supplying material required for restoration and remediation of water resources. This resulted in delayed activities and many activities left behind the schedule. RCC Pipes 850 RCC pipes, 1350 RCC rings, weren't abundantly available for the rehabilitation and restoration of wells and the Karez.

Cultural Limitations: In some points of the district teams observed strict cultural setting which would not allow women to go the distribution centers despite their urgent needs. In Jamak UC, there were a few reports that widows and orphan were not receiving any assistance.

D) Conclusions

The ARC-UNICEF Water, Sanitation and Hygiene project has successfully achieved the target goals in order to cater to the immediate shelter and water and sanitation needs of the people affected in the floods disaster in Balochistan. The floods caused damages to the entire infrastructure particularly the mud houses and water resources collapsed and resulted in contamination of the drinking water sources. The flood water swept away the houses and more than a 41,500 shelterless people became exposed to the hot and dry weather, outbreak of water borne diseases, and were forced to defecate in the open. Responding to the situation, ARC set its assessment team in the Kharan district and collected the amount of damage. ARC-OFDA/USAID project was designed to provide emergency nature shelter houses to 2,000 families and address to the water, sanitation, and hygiene needs of a 74,600 people in Jamak, Jodai Kalat, and Toumulk union councils of district Kharan.

Throughout the project period, the weather remained the biggest obstacle for the staff working in field. Yet, the team was motivated and committed to grasp over the situation which was worsening by every passing day. We have been able to complete our shelter project on time and have provided construction to 175% more families than anticipated. Under the WASH activities, ARC Technical Team installed 22 pillow tanks to instantaneously fulfill the drinking water need, and later reconstructed 7 community water supply schemes, repaired and replaced 67 hand pumps, repaired and replaced 17 windmills, constructed 800 latrines, cleaning and digging of 75 wells. The WASH project received a major support from UNICEF leading to a joint course of implementation and completion of the said targets.

During the entire designing of project plan, ARC teams strictly adhered to the SPHERE standards and ARC policy and procedures in regards to disaster management, staff hiring, procurement, and carrying the activities at the field level. The emergency shelter and clean drinking water is successfully provided to the target beneficiaries along with provision of water purification solution so that the outbreaks of water borne diseases are prevented.

ARC' overarching aim is to empower the community with quality healthcare, clean drinking water, sanitation and hygiene as basic rights. The project has been a great success as it not only facilitated the provision of clean water and sanitation but continued building staff capacity through on-job training on masonry and plumbing. Hygiene promotion was one of the significant components of the project which educated the beneficiary community on better hygiene practices thus enabling them to use their skills over years to benefit the communities of which they belong and serve. ARC expresses their thanks to the entire beneficiary community, the ARC Technical team, and especially OFDA/USAID for their continuous support in making the project a great success.

Progress against the proposed indicators:

Sector 1: Shelter		
Objective 1.	To provide immediate, life-saving emergency shelter to flood affected communities	
Sub-sector	Emergency Shelter	
<i>Indicators</i>	<i>Proposed Activities</i>	<i>Progress Achieved</i>
Indicator A:	Number of families receiving shelter according to SPHERE Guidelines (Target 2,000 families)	2,000 emergency shelter packages were distributed in Kharan. The shelter team constructed 711 shelter houses for EVI families in the target area.
Indicator B:	Percentage of total affected population receiving shelter assistance (Target 22%)	35%
Indicator C:	Amount and percentage of approved project budget spent in the affected economy	100%
Sector 2: Water, Sanitation and Hygiene (WASH)		
Objective 2:	To ensure access to safe clean drinking water and prevent/ minimize outbreak of communicable diseases among flood-affected populations	
Sub-sector	Hygiene promotion	
Indicator A	Average cleanliness of water points three months after their completion, reported as the percent of water points	75%
Indicator B:	Average increase in good hand washing and other hygiene practices (reported as percentage of people)	80%
Indicator C:	Average increase in correct water usage practices, (reported as percentage of people)	70%
Sub-sector	Sanitation (Household level)	
Indicator A:	Number of household latrines constructed (Target 450)	Pit digging for 750 latrines under the cash for work activity
Indicator B:	Number of beneficiaries benefiting from household latrines (Target 4,500)	7500 population benefited through proper sanitation
Indicator C:	Number of communal/institutional latrines constructed (Target 20)	50 communal and institutional latrine pits were constructed
Indicator D:	Number of beneficiaries benefiting from communal/institutional latrines (Target 400)	2000 population benefited
Indicator E:	Number of household hand washing facilities introduced (Target 450)	ARC received in-kind contribution of 40,000 washing and 50,000 toilet soaps and distribute din the target beneficiaries.
Indicator F:	Number of communal hand washing facilities introduced (Target 50)	---
Indicator G:	Number of household waste management pits dug (Target 500)	---
Sub-Sector:	Water	
Indicator A:	Number of protected water points (hand dug wells, boreholes, springs etc) established (Target 10)	75 open wells dug out, 30 hand pumps, 7 wind mills installed and north Kharan Karez restored so 113 water points protected
Indicator B:	Geo-coordinates of every protected	Not available

	water point	
Indicator C:	Number of beneficiaries receiving water from protected water points (Target 100,000)	94,600 population benefited from all above protected schemes
Indicator D:	Average increase in water quantity available per person, reported as two numbers: liters available per person per day before the intervention (Current 1 liter) liters available per person per day after the intervention. (Target 15 liters)	Before intervention 1 liter was available per person per day After all above mention interventions, average increase per capita per day is 18 liters.
Indicator E:	Average reduction in time spent collecting water per family, reported as two numbers: minutes it takes a family to collect water each day before the intervention (Current 180-300 minutes) minutes it takes a family to collect water each day after the intervention (Target 10-15 minutes)	Before intervention each family collected water from individual bores out side village which takes 1 to 2 hours After all above intervention each family collects water inside village with in 10 minutes
Cross Cutting Theme	Sector/Sub Sector	Indicators
Protection	Shelter	Number of settlement solutions provided that reduce the need for large camps (Target 2,000) 2,000 emergency shelter packages were distributed in Kharan. The shelter team constructed 711 shelter houses for EVI families in the target area
Protection	WASH	Percentage of latrines built with separate facilities for men and women (Target 100%) Percentage of latrine facilities providing accompaniment services for women and girls, where necessary (Target 100%)
Cash for Work	Shelter and WASH	Number of people employed by CFW 3730 people male and female employed through CFW break up is as follows: 1600 for Latrine construction 300 for wells 150 for trench digging 180 for hand pump and wind mills wells cleaning 1500 for shelter construction Percentage of beneficiaries reporting increased access to food and non-food items as a result of the program 75 %

