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RESEARCH ARTICLE

IMPACT OF BDN PROGRAM IMPLEMENTATION ON HEALTH IN TWO VILLAGES OF SOUTHERN AFGHANISTAN.

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Abstract

This study focuses on the Basic Development Needs (BDN) survey and the implementation in the villages of two different provinces with focus on key changes over 9 months of implementation of proposed BDN activities. The survey in the two targeted villages before and after the implementation highlights some importance of strengthening the community-based development activities that bring impressive results in the lives of targeted communities.

The study was a comparison descriptive quantitative study to measure magnitude, variability of a need or problem and to explore associated factors. Descriptive studies are often guided by questions rather than formal hypotheses, and are often the first step in more directed research. A structured questionnaire was designed based on the goal and objectives. The questionnaire was originally developed in English and then translated into to the local language (Pashto).

The questionnaire was divided into two parts for the collection of data on: demographic structure, and health status & economic condition of the population. The intended population of the research was the families of two pre identified villages of Helmand and Kandahar provinces, where BDN programme was not implemented in the past with the aim possible implementation in the near future. Couple were used as surveyors administering a well-designed structured questionnaire.

The result of the study, after nine months of BDN implementation indicated significant positive differences in the key indicators in the mentioned villages. The prominent changes in Rawani Village of Kandahar province included still births rate/1000 births decreased from 53 to 39, under one year mortality rate /1000births from 53 to 43, under five (1-5) mortality rate /1000births from 9 to 6 and MMR/1,000 LB from 32 to 23, an increase in number of deliveries assisted by trained health staff 185 to 214. Similarly there was positive changes in ANC, PNC, FP and breast feeding in the village. Likewise the improved coverage in immunization was another significant change in village. For instance Penta3 coverage from 36% to 43% and TT2+ from 25% to 28

Similarly the study highlighted the changes determined in Safian Village of Helmand province; these changes were mainly in improved maternal mortality ratio (from 25 to 19), under five mortality rate (1-

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<5) from 8 to 6/1000, decreased still births rate/1000 births from 41 to 32, deliveries assisted by trained health staff from 76 to 107, routine EPI (Penta3 coverage from 28% to 40% and TT2+ from 28% to 35%). In addition the study indicated tangible improvement in other areas of BDN in both villages, for examples increased access to portable drinking water, access to safe latrines, use of garbage, use a reliable method for irrigation, use of better quality of seeds in agriculture and monthly earnings of families to more 30 US\$/month and decreased unemployed adults and attending school by young children increased from 30% to 34%.

Even though a systematic sampling was used and all houses in the selected villages were selected, the study still had some shortcomings and limitations, for instance the size of sample of size was too small to represent the whole district and province, the density of households and finding of the participants. In order to minimize these shortcomings the VDCs, CRs and TST were used as helper force to help the surveyors in door to door visits.

Generally, as per the study results, the BDN survey and the implementation of the proposed activities based on the BDN approach are quite significant and important to increase awareness of population on the concept of self-help and self-reliance and lead to further cooperation and collective action among the villagers for their well-being and healthy life style. Strengthening of the community-based development activities bring impressive results in the target areas and they will help in further expansion of the BDN programme to neighboring communities. Even though the outcome will be impressive but the pace will be slower as the BDN are development activities that need a lot of time and finance.

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Rationale and Background:-

Community organization and mobilization are key elements of the BDN programme through which all members of the community, particularly women, are encouraged to improve their health and other socioeconomic needs. Enabling women, improving access to basic physical and social needs, such as health services, nutrition, safe water, sanitation and shelter contribute to poverty reduction and improvement of health outcomes.

Afghanistan illustrates the devastating impact of four decades of war and conflict on development. This land-locked country has been through 40 years of war, virtually without pause. As a result, every single aspect of development – from the incidence of poverty, to health care, agriculture, environment, and education has been adversely affected. Afghanistan today is not just one of the poorest countries in the world, but also has the worst human development indicators, comparable to only two equally war stressed countries in Africa – Sierra Leone and Angola.

In 2000, when countries around the world agreed to the Millennium Development Goals, Afghanistan was embroiled in war and did not participate in the 2000 UN Summit. It signed the Millennium Declaration only in 2004 and has set itself targets based on data from 2002-2004 to be achieved by 2020. An additional goal of ‘enhancing security’ had been added.

The country is now slowly on the road to recovery. It has a new constitution, an elected government and has taken the first tentative steps towards dealing with its enormous legacy of war.

Unfortunately at the beginning of the 21st century, the number of people living in absolute poverty continues to raise with grim health consequences. Presently, about 20% of the world’s population or 1.3 billion people live in absolute poverty, with an income of less than \$1 per day. These people have been excluded from many of the benefits of economic development and advances in human health that took place during the last century. Aggregate figures for economic growth disguise the fact that the number of people in absolute poverty is still rising. Surviving on less than US\$ 2 per day is a reality for almost half the people on the planet. Poverty reduction is a critical development

challenge for many Member States in the Region. Nine of the Region's countries and areas have annual per capita incomes of less than \$1000. Those living in absolute poverty are five times more likely to die before reaching the age of five, and two-and-half times more likely to die between the ages of 15 and 59, than those in higher-income groups. Differences in maternal mortality are even more dramatic: the lifetime risk of dying in pregnancy in parts of sub-Saharan Africa, where almost 50% of the population live in absolute poverty, is one in 12, compared to one in 4000 in Europe.

More than 10 years have passed since world leaders established goals and targets to free humanity from extreme poverty, hunger, illiteracy and disease. The Millennium Declaration and the MDG framework for accountability derived from it have inspired development efforts and helped set global and national priorities and focus subsequent actions. While more work lies ahead, the world has cause to celebrate, in part due to the continued economic growth of some developing countries and targeted interventions in critical areas. Increased funding from many sources has translated into the expansion of programmes to deliver services and resources to those most in need. Here are some of the highlights:

Poverty continues to decline in many countries and regions despite significant setbacks after the 2008-2009 economic downturns, exacerbated by the food and energy crisis, the world is still on track to reach the poverty-reduction target.

Despite the overwhelming obstacles that Afghanistan faces in meeting its MDG targets, it has made tentative progress in a few areas.

- As a result of its back-to-school campaign, four million children are now in school. According to UNICEF in 2003, the overall school attendance rate in Afghanistan doubled from 27% to 54% between 1997 and 2002. Girls' attendance rate tripled from 13% to 40% in the same period. For 2003 the net attendance was 54%, or 2.3 million students, principally in urban areas.
- In 2003, almost one-third (33.6%) of young Afghans between 15 and 24 years of age are literate. This includes an 18% literacy rate for young women and a 50% rate for young men.
- The measles immunization program has been a success in Afghanistan, with 71% of children aged less than 12 months having been immunized. Immunization coverage is higher in urban areas than in rural areas. As a result, infant and child mortality in rural areas is around 28% higher than in urban areas.

Even then, there is a lot to be done to improve socio-economical and health indicators in Afghanistan.

The basic development needs (BDN) approach for socio-economic uplift of communities, which aims at health and better quality of life of people first started in Afghanistan in 1996 through establishing a model village in Kabul province. Since then the programme, despite difficulties and volatile situations in Afghanistan, was steadily expanded within Kabul province as well as to other regions within the country.

During the period, the programme has had positive effects in health services utilization and coverage and also in improvement of health indicators.

Currently, the BDN programme is covering 37 different communities with a total population of over 135,000 people in eight provinces of Afghanistan at different stages of the programme implementation.

In 2003, the programme has had significant achievements, both in the expansion as well as in the management of the activities.

As the BDN approach entails, the socio-economic activities supported through the BDN programme in Afghanistan are based on local technology, prioritized by the people. Since, the people's needs are tremendous and their resources are limited to contribute to the BDN process, it is hard to expect very impressive results from the meagre financial input of WHO in the process. It is, therefore, valid to say that for achieving more visible outcomes, in addition to strengthening the management capacity of the programme, more material support is required.

Literature Review:-

Based on the baseline and second data assessed survey in 2016 and 2017 in the targeted villages, the two variables are cleared to us the BDN programme implementation show more progress on the key indicators of health and BDN.

Literature review of BDN programme implementation in some developing countries shows significant outcomes, which gives a clear message that it can equally benefit other countries with the same socio-economic situation. The following table highlights the outcome of BDN programme implementation in Somalia and Sudan.

Indicators	Pre BDN		Post BDN	
	Somalia (2007)	Sudan (2008)	Somalia (2009)	Sudan (2009)
IMR(1000 B)	89	162	30	72
Malnutrition %	32	38	11	22
enrolment in primary school %	26	29	48	51
EPI coverage%	25	18	60	39
ANC%	16	12	42	30

Reference- WHO report.

Objectives:-

- **Primary objectives**
 - To bring positive changes in health and other socioeconomic factors within BDN program areas.
- **Secondary objectives**
 - Managing social development through on people's participation and inter-sectoral collaboration among government sectors;
 - Ensuring community self-reliance for their own development needs and health.
 - Improving quality of life for all people in a community through meeting their own basic needs;

Expected outcomes:-

The implementation of the proposed activities based on the BDN approach is expected to bring about more awareness in the target communities about the BDN concept, self-help and self-reliance and lead to further cooperation and collective action among the villagers for their well-being and healthy life style. Strengthening of the community-based development activities is expected to bring about impressive results in the target areas and they will help in further expansion of the BDN programme to neighbouring communities.

Also the participants will acquire knowledge on the principles of development and its linkage with the health. They will also understand about the parameters and process of poverty, its influencing factors and relation with health and the action which can assist in poverty reduction efforts. This knowledge will provide them a better understanding and rationale of the community based approaches for health and development.

Research Question/Hypothesis:-

Community health development is affected by economic condition, access to basic needs (health, food/nutrition, water, sanitation, shelter and education).

Study Design:-

The study was a comparison descriptive quantitative study to measure magnitude, variability of a need or problem and to explore associated factors. Descriptive studies are often guided by questions rather than formal hypotheses, and are often the first step in more directed research.

Research Methodology:-

A structured questionnaire was designed based on the goal and objectives. The questionnaire was originally developed in English and then translated into to the local language (Pashto).

The questionnaire was divided into two parts for the collection of data on: demographic structure, and health status & economic condition of the population. (Questionnaire details are available in the following annexes)

Research design:-

The study was conducted throughout the villages, and all families were included for the research. With this we intended to have full strength of the study. This study was a descriptive cross sectional study aiming to understand the relation between of the key BDN determinants and the health status of targeted population.

The intend population of the research was the families of two pre identified villages of Helmand and Kandahar provinces, where BDN programme was not implemented in the past with the aim possible implementation in the near future. Couple were used as surveyors administering a well-designed structured questionnaire. (Including and excluding factors????)

Research Approach:-

Quantitative research approach was used for the study as to measure magnitude, variability of the need/problem and to explore associated factors.

Targeted areas and the population:-

Two villages (1 from Helmand and 1 from Kandahar province) were selected for the project as the targeted geographical. The idea behind selecting these villages was that these villages were never assessed for BDN in the past, nor had any BDN project before. Similarly the access to the villages was another factor of selecting the villages. At the meantime there was a definite plan to implement the project. All 1,896 families (13,774 individuals) were selected as the study target.

Sampling:-

Since the number of targeted population were relatively low, with keeping in mind full strength of the study, all 1,896 families (100%) were selected as intended participants as the samples with only one interview per family was considered.

Data Collection:-

A structured questionnaire was used for data collection on the demographic structure, health status and economic condition of the population. The questionnaire was used by trained surveyors in the two mentioned villages under the supervision and monitoring of WHO (my self), UNICEF, PHD agriculture and MRRD technical staff. Both male and female surveyors were utilized for the study to maintain gender balance and ensure that females participate in the research. The data collection was well supervised by the assigned team throughout.

Data quality control:-

The pre designed and tested questionnaire that aimed to help the researcher get his desired data was used in the study. The process included developing the questionnaire, training the surveyors and testing them in the field before actual implementation. This helped me to determine the limitation and biased associated with study. Based on this the supervisors were well trained on how to monitor and supervised the surveyors during the actual research.

Measurements:-

Since the study was cross sectional descriptive study and only quantitate research method was used, therefore we did not use any formula, but simple comparison between the baseline study and the final survey, that helped us understand and determine the difference in the situation of people before and after the implementation.

Data Analysis:-

Data of the first and second surveys (baseline and after nine months implementation of the BDN program) were entered; I have done quantitative analysis and used frequency distribution cross tabulation, and chi square test to find the association between two variables. Graphs and tables are used for presentation of the findings.

Ethical Consideration:-

Before starting the study research in the field, ethical approval was taken from ethical committee and approval from the MoPH and government authorities. Informed consent was obtained from participants before collecting data anonymity and confidentiality have been maintained at every stage of the study. In addition couples (male and female) were used as surveyors to respect gender, cultural sensitivity and local area norms while administering the questionnaire at household levels.

Similarly the following key ethical principles were taken into consideration during the study:

- Respect for person's autonomy
- Beneficence
- Integrity

Limitation of the study:-

This study was conducted in Safian village, Lashkergah district of Helmand province; systematic sampling was used, from every house for interview.

One of the study limitations was the availability of research assistant. Another limitation was due to density of family and houses in area, the finding of participant was difficult, so the VDCs, CRs and TST help us door to door visits.

Another limitation was that this study was new in this area. So I had to look for several literatures from health facility to find out information on basic development and use of BDN.

The sample size was small, so this study cannot be used for all population of the district.

Study results:-

Flowing table shows the summary result of the first and second BDN socio-economic survey, demographic structure and health status of the population in Rawani village Dand district of Kandahar Province and Safian Village, Lashkergah District of Helmand province in July-2016 and May 2017.

Rawani Village, Dand district, Kandahar province Summary result of the BDN baseline and nine months after implementation of the BDN program socio-economic Survey: - July 2016 and May-2017								
Demographic structure & health status of the population								
	2016				2017			
Total number of families in the village	1011				1034			
Total number of households in the village	390				402			
Total number of married couples in the village	1007				1029			
Population Age groups	Male	Female	Total	% Age	Male	Female	Total	% Age
Total population in the village	3483	3599	7082	100%	3588	3702	7290	100%
Children 0 - <1 year	139	145	285	4%	143	149	292	4%
Children 1-<5 years	596	614	1,210	17%	613	632	1245	17%
Children 5-<15 years	810	838	1648	23%	832	860	1692	23%
Adult 15 - <45 years	1190	1231	2,421	34%	1226	1265	2491	34%
Adult 45 - <60 years	660	691	1351	19%	682	712	1384	19%
Elderly above 60 years	88	80	168	2%	92	84	176	2%
No. of school age children (Age group 5-<15 Years)	810	838	1648	23%	832	861	1693	23%
No. of school age children (attending school)	476	22	498	30%	532	51	583	34%
Literate persons (age above 15 Years) in the village	507	28	535	14%	522	31	553	14%
Women at Child Bearing Age (15-<45Years)	1231			17%	1265			17%

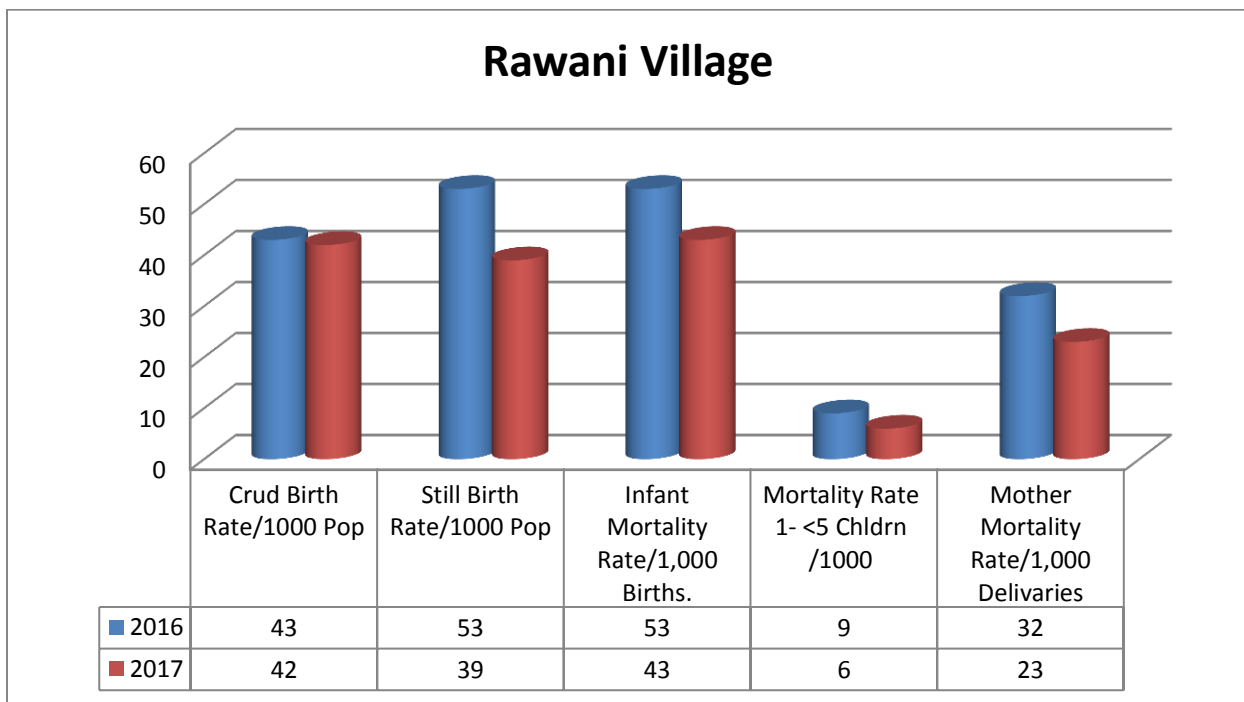
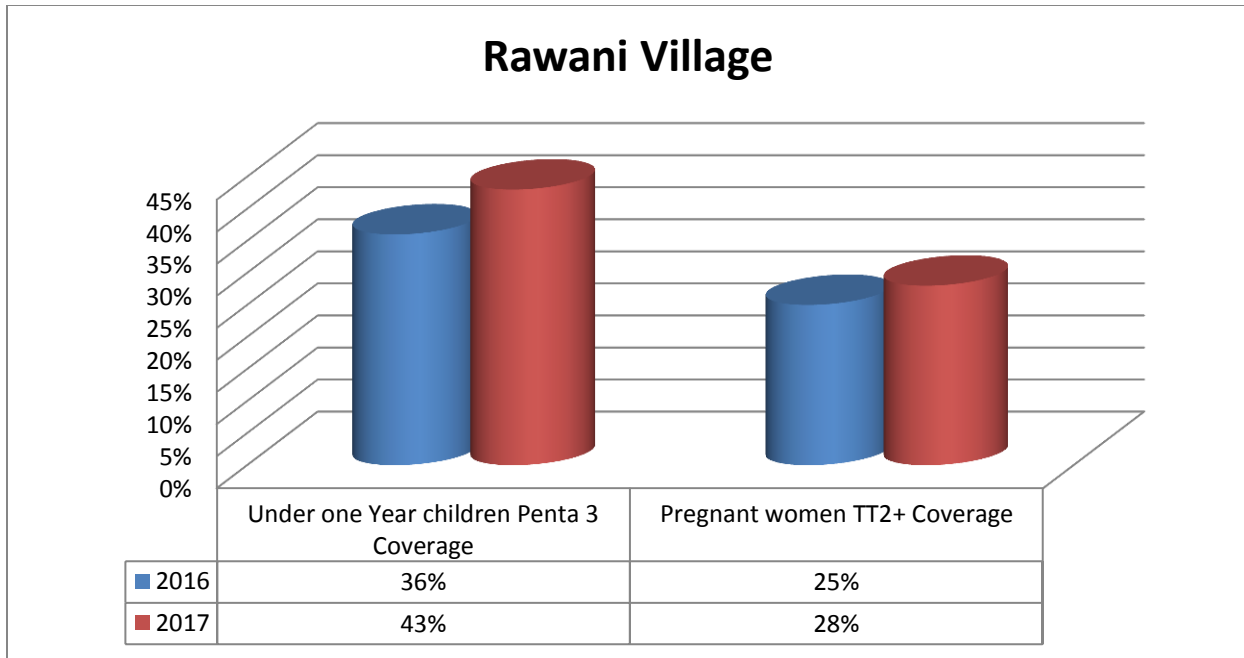
Indicators	2016			2017		
	Tot al	Rate		Tot al	Rate	
No. of children born in the past 12 months in the village	301	43	CBR/1,000 Pop	305	42	CBR/1,000 Pop
No. of still births in the past 12 months in the village	16	53	St.B.R/1,000 Bir	12	39	St.B.R/1,000 Bir
No. of deaths in children under 1 (infants) during the past 12 months	16	53	IMR/1,000 Bir.	13	43	IMR/1,000 Bir.
No. of deaths in children 1-<5 years in the past 12	11	9	MR /1000 1- <5	7	6	MR

months			Children			/1000 1- <5 Children
No. of pregnant women in the village at the time of the survey	252	20 %	of CBA women	258	20 %	of CBA women
No. of pregnant women in their last trimester at the time of the survey	89	35 %	Of preg. Women	88	34 %	Of preg. Women
No. of mothers died due to pregnancy related causes in the past 12 months	8	32	MMR/1,000 LB	6	23	MMR/1, 000 LB

	2016			2017		
	Total	Immunized	%Coverage	Total	Immunized	%Coverage
Vaccination of under 1 children (Penta3)	285	102	36%	292	125	43%
Vaccination of pregnant women(TT2+)	252	62	25%	268	74	28%

Rawani village ,Dand district of Kandahar province baseline and after implementation of the H & BDN program information about the Land holding , Irrigation, Livestock and Poultry		
	2016	2017
Total number of households	390	402
Total number of families	1011	1034
Number of the skilled persons in the village	349	418
Number of the families ,which have access to portable water	515	676
Number of the households, which have access to safe latrines	9	31
Number of the households, which they use garbage	25	46
Number of the households, which they keep poultry	388	394
Number of the households, which they have agriculture land	303	311
Number of the households, which they use a reliable method for irrigation.	25	46
Number of the households, which they use better quality of seeds in agriculture	201	223
Number of the modern appliances in the village	971	1012
Number of the livestock and dairy animals in the village	278	275

The following bar graphs showed health related indicators in July 2016 and May 2017 in Rawani Village, Dand district, Kandahar province, before and after the implementation of BDN program.



Safian Village, Lashkergah district, Helmand province Summary result of the BDN baseline and nine months after implementation of the BDN program socio-economic Survey: - July 2016 and May-2017
Demographic structure & health status of the population

	2016	2017
Total number of families in the village	885	938
Total number of households in the village	290	306
Total number of married	881	939

couples in the village								
Population Age groups	Male	Female	Total	% Age	Male	Female	Total	% Age
Total population in the village	3417	3275	6692	100%	3471	3326	6797	100%
Children 0 - <1 year	182	180	362	5%	186	182	368	5%
Children 1-<5 years	697	563	1260	19%	697	580	1277	19%
Children 5-<15 years	990	943	1933	29%	1005	970	1975	29%
Adult 15 - <45 years	1244	1217	2461	37%	1264	1242	2506	37%
Adult 45 - <60 years	227	287	514	8%	240	291	531	8%
Elderly above 60 years	77	55	132	2%	79	61	140	2%
No. of school age children (Age group 5-<15 Years)	990	943	1933	29%	1005	970	1975	29%
No. of school age children (attending school)	869	276	1145	59%	907	296	1203	61%
Literate persons (age above 15 Years) in the village	562	18	580	19%	571	22	593	19%
Women at Child Bearing Age (15-<45Years)	1217			18%	1242			18%

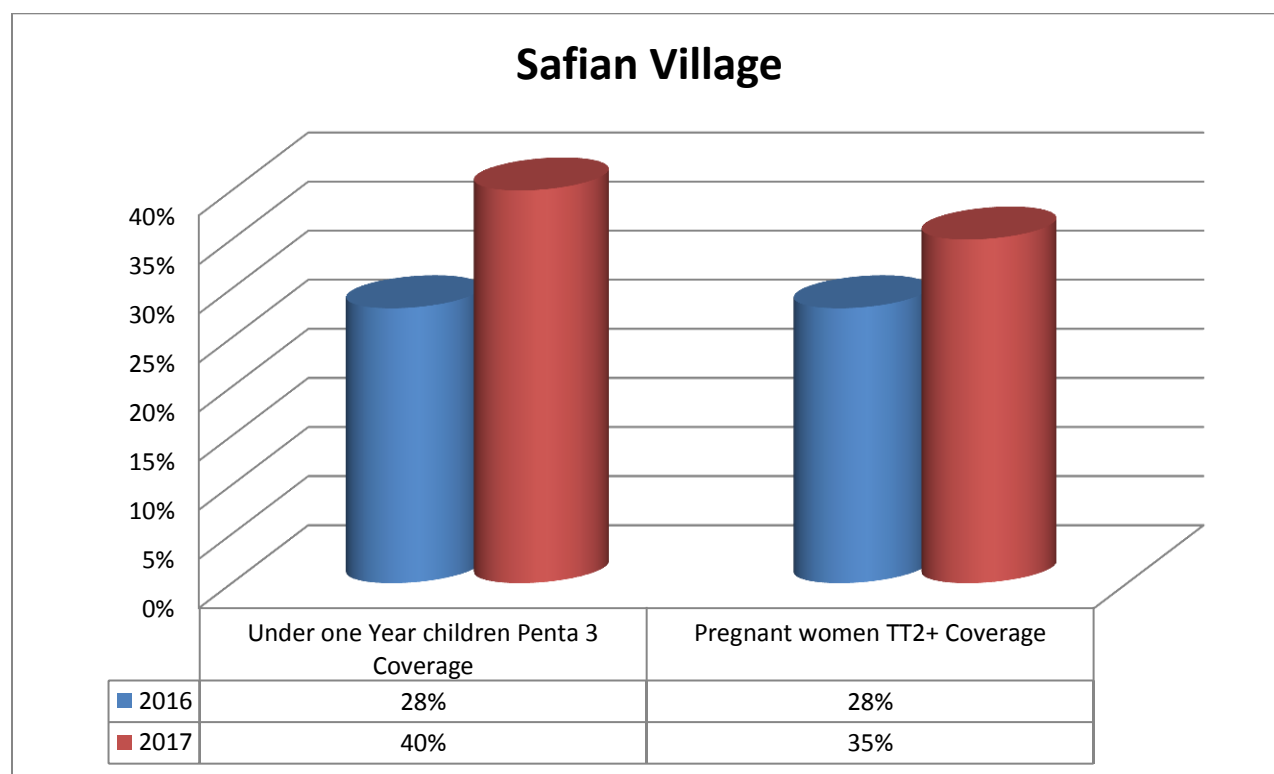
Indicators	2016			2017		
	Tot al	Rate		Tot al	Rate	
No. of children born in the past 12 months in the village	365	55	CBR/1,000 Pop	373	55	CBR/1,000 Pop
No. of still births in the past 12 months in the village	15	41	St.B.R/1,000 Bir	12	32	St.B.R/1,000 Bir
No. of deaths in children under 1 (infants) during the past 12 months	12	33	IMR/1,000 Bir.	6	17	IMR/1,000 Bir
No. of deaths in children 1-<5 years in the past 12 months	10	8	MR /1000 1- <5 Children	8	6	MR /1000 1- <5 Children
No. of pregnant women in the village at the time of the survey	240	20 %	of CBA women	253	20 %	of CBA women
No. of pregnant women in their last trimester at the time of the survey	82	34 %	Of preg. Women	84	33 %	Of preg. Women
No. of mothers died due to pregnancy related causes in the past 12 months	9	25	MMR/1,000 LB	7	19	MMR/1,000 LB

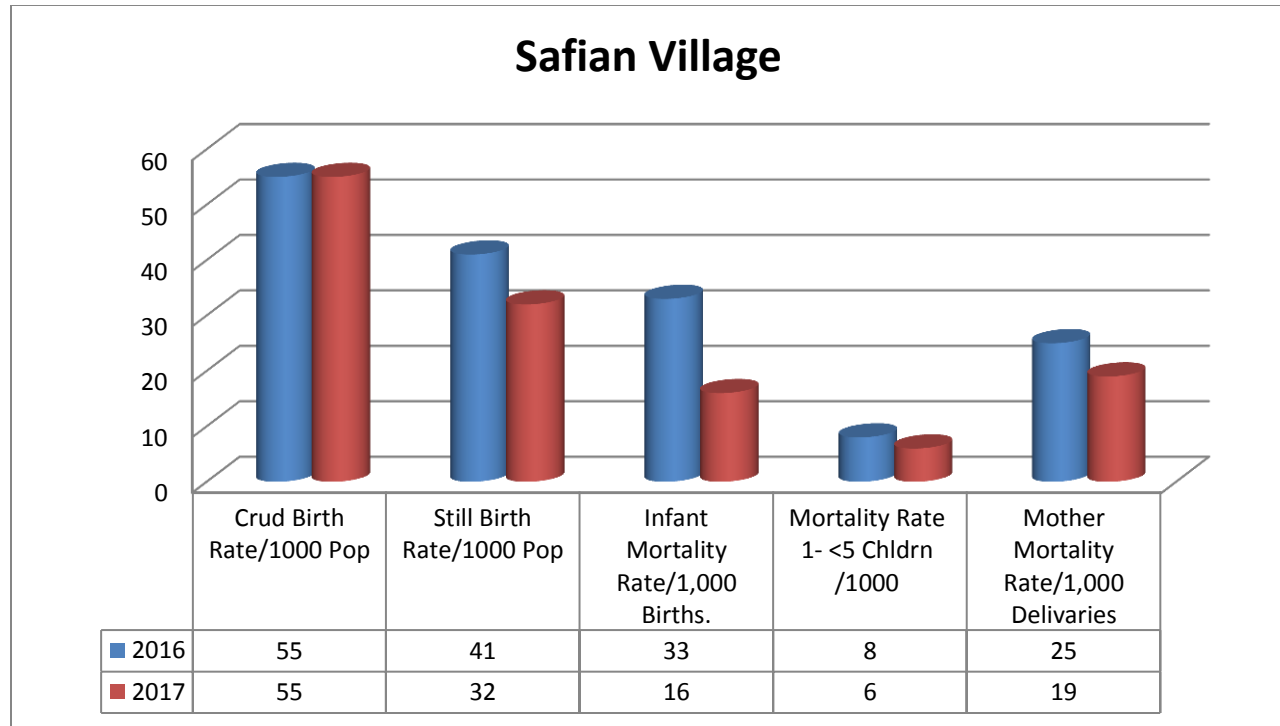
	2016			2017		
	Total	Immunized	%Coverage	Total	Immunized	%Coverage
Vaccination of under 1 children (Penta3)	362	103	28%	368	149	40%
Vaccination of pregnant women(TT2+)	240	68	28%	253	88	35%

Safian village ,Lashkergah district of Helmand province baseline and after implementation of the H & BDN program information about the Land holding , Irrigation, Livestock and Poultry		
	2016	2017
Total number of households	290	306
Total number of families	885	938
Number of the skilled persons in the village	486	591
Number of the families ,which have access to portable water	276	382
Number of the households, which have access to safe latrines	65	93

Number of the households, which they use garbage	44	78
Number of the households, which they keep poultry	282	296
Number of the households, which they have agriculture land	84	88
Number of the households, which they use a reliable method for irrigation.	13	19
Number of the households, which they use better quality of seeds in agriculture	19	26
Number of the modern appliances in the village	886	936
Number of the livestock and dairy animals in the village	98	117

The following bar graphs show health related indicators in July 2016 and May 2017 in Safian Village, Lashkergah district Helmand province, before and after the implementation of BDN program.





Discussion:-

Started in Afghanistan in 1996 through establishing a model village in Kabul province, the BDN programme implementation despite difficulties and volatile situations in Afghanistan, has had positive impacts in health services utilization and coverage as well as in improvement of health indicators.

Currently, the BDN programme is covering 37 different communities with a total population of over 135,000 people in eight provinces of Afghanistan at different stages of the programme implementation. As the BDN approach entails, the socio-economic activities supported through the BDN programme in Afghanistan are based on local technology, prioritized by the people. This study indeed highlighted the importance and relevance of BDN programme implementation in Afghanistan. It further identified the gaps, areas for improvement and needs for implementation of such activities.

Since, the people’s needs are tremendous and their resources are limited to contribute to the BDN process, it is hard to expect very impressive results from the meagre financial input of WHO in the process. It is, therefore, valid to say that for achieving more visible outcomes, in addition to strengthening the management capacity of the programme, more material support is required.

Recommendation:-

Looking at the study results, it is now clear that the BDN programme implementation has definite impact on the health status of the target beneficiaries, so it is highly recommended that similar activities should be implemented in other areas of the country with more focus on hard to reach areas. Meanwhile in order to have better and quality data, it is recommended that bring and involve the communities from the planning till the implementation, and this has been as success story of the study. Gender balance and using more female, particularly as supervisors and monitors for the study will further improve the quality of collected data will bring much improved information for planning process.

Conclusion:-

The BDN survey and the implementation of the proposed activities based on the BDN approach are quite significant and important to increase awareness of population on the concept of self-help and self-reliance and lead to further cooperation and collective action among the villagers for their well-being and healthy life style. Strengthening of the community-based development activities would bring impressive results in the target areas and they will help in

further expansion of the BDN programme to neighbouring communities. Even though the outcome will be impressive but the pace will be slower as the BDN are development activities that need a lot of time and finance. At the same time there would be need for improved planning and resource mobilization and utilization in order to achieve the outcome based on the priorities of the targeted communities.

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3. Basic Development Guideline MoPH Afghanistan
4. Provincial HMIS data of Kandahar province
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6. Annual activities reports of Health Cluster, WASH, Nutrition and Food security clusters of Southern region, Afghanistan.

Annexes:-

Annex-1

Village level Summary of the BDN baseline socio-economic survey

Rawani village Dand district of Kandahar Province in July-2016			
Q. No.	Question	Answer	G. Total
1	Demographic Data		
1.0	Number of Families in the cluster	Total	1011
1.1	Family members	Total	7082
		Male	3483
		Female	3599
	Children < 1 year	Total	285
		Male	139
		Female	145
	Children 1-<5 years	Total	1210
		Male	596
		Female	614
	Children 5-<15 years	Total	1648
		Male	810
		Female	838
	Adults 15-<45 years	Total	2421
Male		1190	
Female		1231	
Adults 45-<60 years	Total	1351	
	Male	660	
	Female	691	
Elderly above 60 years	Total	168	
	Male	88	
	Female	80	
1.2	Married couples in the family	No of families	1011
		No of the couples in Families	1007
2	Education & Literacy		
2.1	School age children (5-<15) in the family:	Total	498
		Male	476
		Female	22
	Attending school	Total	1150
		Male	334
Not Attending school			

		Female	816
2.2	Adult Literacy (above 15): Literate persons in the family	No of families	1011
		Total literate persons	535
		Male	507
		Female	28
3	Training and Skills		
3.1	Any professional or technical training among in family members	No of persons who took the trainings	95
		Male	91
		Female	4
		1. Health	4
		2. Engineering	0
		3. Agriculture	21
		4. Education	12
		5. Civil	5
		6. Military	44
7. Others	9		
3.2	Skilled persons in the family	No of skilled persons	349
		Male	301
		Female	60
		1. Carpenter	7
		2. Sew/Tailor	78
		3. Mechanic	18
		4. Others	239
4	Water		
4.1	Family has access to potable water throughout the year	No of families	1011
		If yes, 1. River	0
		2. S. well	332
		3. Pond	0
		4. HP/TW	515
		5. Piped water	0
		6. Other	164
4.2	Sufficient water for domestic use is available throughout the year	Yes	838
		No	173
5	Housing and Environment		
5.1	Do you own the house?	Yes	951
		If no, Rented	0
		Other	60
5.2	No. of living houses	Number	390
5.3	Do the house has separate ventilated kitchen?	Yes	88
		No	302
5.4	Is the house electrified?	Yes	113
		No	277
5.5	Is there any specific shower in the households?	Yes	9
		No	381
5.6	Is there a sanitary latrine in the house?	No of households	390
		If yes, 1. VIP	2
		2. WC	7
		3. Traditional(unsafe)	381
5.7	Do you have and use garbage container?	Yes	25
		No	365
5.8	Does wastewater stagnate around the vicinity of your household?	Yes	118
		No	272
5.9	Do you have modern appliances in your households?	No of houses	390

		If yes, 1. Radio	509
		2.Audio player	338
		3.Television	47
		4.Refrigerator	8
		5.Other	69
6	Land holding and Irrigation		
6.1	Do you own agricultural land?	No of households	390
		Yes	303
		No	87
6.2	Do the households use a reliable method for irrigation?	No	278
		Yes, Type	25
6.3	Do the households use better quality of seeds in agriculture?	Yes	201
		No	102
6.4	Do the households seek technical guidance of experts for agriculture?	Yes	84
		No	219
7	Livestock and Poultry		
7.1	Do the households raise livestock and dairy animals?	No of households	390
		If yes, 1.Cows	83
		2.Buffaloes	0
		3.Sheep	129
		4.Goats	41
		5. Camels	0
		6.Other	20
7.2	Do the households keep poultry?	No of household	390
		If yes, household Use	388
		Commercial	9
8	Means of livelihood		
8.1	Are there any means of livelihood of the households?	No households	390
		If yes, 1, Agriculture	303
		2.Livestock	258
		3.Small trades	29
		4.Skilled/tech	51
		5. Employment	122
		6. Labor	643
		7. Other	396
8.2	Does the family earn more than 30 US\$ in a month?	No of families	1011
		Yes	891
		No	120
8.3	Are there any unemployed (adults) people in the family?	Adult population	3940
		Male	916
		Female	1991
9	Food, Nutrition and Growth Monitoring		
9.1	Do family members eat the necessary food items at least twice a week?	No of families	1011
		Yes, meat ,fish, eggs or milk	471
		Fruits or vegetables	909
9.2	How many under2 year children have been breast-fed?	Total number of under 2 years children	564
		<6 M	131
		>6 M	279
9.3	How many under1 year children were weighed at birth?	Number weighed	152
		Normal (>2.5 kg)	137
		LBW (<2.5 kg)	15
9.4	How many children 0-<5 years of age are growing normally?	Number (Normal)	901
		Number (Abnormal)	603

9.5	How many children 5-<15 years of age are growing normally?	Number (Normal)	1557
		Number (Abnormal)	91
10	Health		
10.1	How many children were born in these households during the past 12 months?	Number	301
10.2	How many stillbirths during the past 12 months?	Number	16
10.3	How many children born with congenital problems?	Total number	3
		1. Physical	2
		2. Mental	1
		3. Visual	0
10.4	How many children of less than one-year age died in the past 12 months?	If yes, number	16
		Age at death	
		1. NT	1
		2. ARI	3
		3. Diarrhea	2
10.5	How many children 1-<5 years of age died in the past 12 months?	Number	11
		Age at death	
		1. ARI	2
		2. Diarrhea	3
10.6	Are the children under one year of age vaccinated?	Number of children	285
		If yes, Completed-number	102
		Not Completed-number	183
10.7	Are there any pregnant women living in this house at this time?	No of CBA women	1231
		No of pregnant	252
		Last Trimester	89
10.8	How many of the pregnant women have been vaccinated against tetanus (T2+)?	Number	62
10.9	Has the pregnant women been examined by trained health worker during pregnancy (ANC)?	No of pregnant	252
		Yes	175
		No	77
10.1	How many deliveries trained health staff has assisted?	Total Number	185
		1. CHC or BHC	54
		2. CHW	22
		3. Private clinic	27
		4. RH and Aino Maternity Center	82
10.11	Have the mothers been attended by a health worker or trained THW at-least once within six weeks after delivery?	Yes	25
		No	224
10.12	How many pregnant women have died due to pregnancy during the past 12 months	Number	8
10.13	How many couples in your family use family planning methods?	Total Number	171
		If Yes, 1. Condom	35
		2. Pills	103
		3. I.U.D	4
10.14	Are there family members suffering from any chronic disease?	4. Other	29
		No of total families	1011
		If Yes, Number?	84
10.15	Are there family members suffering from any disability?	No of total families	1011
		If Yes, Number?	65
		1. Physical	41
		2. Mental	19

		3. Vision	5
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Anex-2

The tables Bellow shows the 2nd after nine months summary of Rwani village Dand district of Kandahar Province in May.2017.

Q. No.	Question	Answer	G. Total
1	Demographic Data		
1.0	Number of Families in the cluster	Total	1034
1.1	Family members	Total	7290
		Male	3588
		Female	3702
	Children < 1 year	Total	292
		Male	143
		Female	149
	Children 1-<5 years	Total	1245
		Male	613
		Female	632
	Children 5-<15 years	Total	1692
		Male	832
		Female	860
	Adults 15-<45 years	Total	2491
		Male	1226
Female		1265	
Adults 45-<60 years	Total	1394	
	Male	682	
	Female	712	
Elderly above 60 years	Total	176	
	Male	92	
	Female	84	
1.2	Married couples in the family	No of families	1034
		No of the couples in Families	1029
2	Education & Literacy		
2.1	School age children (5-<15) in the family:	Total	558
		Male	532
		Female	51
		Attending school	
		Not Attending school	
		Total	1135
		Male	300
		Female	810
2.2	Adult Literacy (above 15): Literate persons in the family	No of families	1034
		Total literate persons	553
		Male	522
		Female	31
3	Training and Skills		
3.1	Any professional or technical training among in family members	No of persons who took the trainings	213
		Male	201
		Female	12
		1. Health	10
		2. Engineering	11
		3. Agriculture	74

		4. Education	22
		5. Civil	15
		6. Military	44
		7. Others	27
3.2	Skilled persons in the family	No of skilled persons	418
		Male	352
		Female	66
		1. Carpenter	8
		2. Sew/Tailor	84
		3. Mechanic	17
		4. Others	243
4	Water		
4.1	Family has access to potable water throughout the year	No of families	1034
		If yes, 1. River	0
		2. S. well	228
		3. Pond	0
		4. HP/TW	676
		5. Piped water	0
		6. Other	130
4.2	Sufficient water for domestic use is available throughout the year	Yes	906
		No	128
5	Housing and Environment		
5.1	Do you own the house?	Yes	962
		If no, Rented	0
		Other	72
5.2	No. of living houses	Number	402
5.3	Do the house has separate ventilated kitchen?	Yes	112
		No	290
5.4	Is the house electrified?	Yes	134
		No	268
5.5	Is there any specific shower in the households?	Yes	15
		No	387
5.6	Is there a sanitary latrine in the house?	No of households	402
		If yes, 1. VIP	9
		2. WC	22
		3. Traditional(unsafe)	371
5.7	Do you have and use garbage container?	Yes	46
		No	356
5.8	Does wastewater stagnate around the vicinity of your household?	Yes	163
		No	239
5.9	Do you have modern appliances in your households?	No of houses	402
		If yes, 1. Radio	522
		2. Audio player	358
		3. Television	56
		4. Refrigerator	14
		5. Other	62
6	Land holding and Irrigation		
6.1	Do you own agricultural land?	No of households	402
		Yes	311
		No	91
6.2	Do the households use a reliable method for irrigation?	No	265
		Yes, Type	46
6.3	Do the households use better quality of seeds in	Yes	223

	agriculture?	No	88
6.4	Do the households seek technical guidance of experts for agriculture?	Yes	102
		No	209
7	Livestock and Poultry		
7.1	Do the households raise livestock and dairy animals?	No of households	402
		If yes, 1.Cows	88
		2.Buffaloes	0
		3.Sheep	123
		4.Goats	42
		5. Camels	0
7.2	Do the households keep poultry?	No of household	402
		If yes, household Use	394
		Commercial	14
8	Means of livelihood		
8.1	Are there any means of livelihood of the households?	No households	402
		If yes, 1, Agriculture	311
		2.Livestock	275
		3.Small trades	41
		4.Skilled/tech	63
		5. Employment	148
		6. Labor	684
7. Other	432		
8.2	Does the family earn more than 30 US\$ in a month?	No of families	1034
		Yes	912
		No	122
8.3	Are there any unemployed (adults) people in the family?	Adult population	4061
		Male	874
		Female	1975
9	Food, Nutrition and Growth Monitoring		
9.1	Do family members eat the necessary food items at least twice a week?	No of families	1034
		Yes, meat ,fish, eggs or milk	548
		Fruits or vegetables	984
9.2	How many under2 year children have been breast-fed?	Total number of under 2 years children	587
		<6 M	142
		>6 M	302
9.3	How many under1 year children were weighed at birth?	Number weighed	178
		Normal (>2.5 kg)	166
		LBW (<2.5 kg)	12
9.4	How many children 0-<5 years of age are growing normally?	Number (Normal)	978
		Number (Abnormal)	559
9.5	How many children 5-<15 years of age are growing normally?	Number (Normal)	1605
		Number (Abnormal)	87
10	Health		
10.1	How many children were born in these households during the past 12 months?	Number	305
10.2	How many stillbirths during the past 12 months?	Number	12
10.3	How many children born with congenital problems?	Total number	2
		1. Physical	1
		2. Mental	0
		3. Visual	0
10.4	How many children of less than one-year age died in the past 12 months?	If yes, number	13
		Age at death	

		1. NT	3
		2. ARI	1
		3. Diarrhea	2
		4. Other	7
10.5	How many children 1-<5 years of age died in the past 12 months?	Number	7
		Age at death	
		1. ARI	2
		2. Diarrhea	1
		3. Other	4
10.6	Are the children under one year of age vaccinated?	Number of children	292
		If yes, Completed-number	125
		Not Completed-number	167
10.7	Are there any pregnant women living in this house at this time?	No of CBA women	1265
		No of pregnant	258
		Last Trimester	88
10.8	How many of the pregnant women have been vaccinated against tetanus (T2+)?	Number	74
10.9	Has the pregnant women been examined by trained health worker during pregnancy (ANC)?	No of pregnant	268
		Yes	217
		No	51
10.1	How many deliveries trained health staff has assisted?	Total Number	214
		1. CHC or BHC	66
		2. CHW	39
		3. Private clinic	18
		4. RH and Aino Maternity Center	91
10.11	Have the mothers been attended by a health worker or trained THW at-least once within six weeks after delivery?	Yes	38
		No	246
10.12	How many pregnant women have died due to pregnancy during the past 12 months	Number	6
10.13	How many couples in your family use family planning methods?	Total Number	198
		If Yes, 1. Condom	49
		2. Pills	115
		3. I.U.D	8
		4. Other	26
10.14	Are there family members suffering from any chronic disease?	No of total families	1034
		If Yes, Number?	71
10.15	Are there family members suffering from any disability?	No of total families	1034
		If Yes, Number?	56
		1. Physical	42
		2. Mental	8
		3. Vision	6

Anex-3

Village level Summary of the BDN baseline socio-economic survey			
Safian village, Lashkergah district of Helmand Province in July-2016			
Q.No.	Question	Answer	G.Total
1	Demographic Data		
1.0	Number of Families in the cluster	Total	885
1.1	Family members	Total	6692
		Male	3417
		Female	3275
	Children < 1 year	Total	362

		Male	182
		Female	180
	Children 1-<5 years	Total	1248
		Male	695
		Female	563
	Children 5-<15 years	Total	1933
		Male	990
		Female	943
	Adults 15-<45 years	Total	2433
		Male	1246
		Female	1217
	Adults 45-<60 years	Total	514
		Male	227
		Female	287
	Elderly above 60 years	Total	132
		Male	77
		Female	55
1.2	Married couples in the family	No of families	885
		No of the couples in Families	881
2	Education & Literacy		
2.1	School age children (5-<15) in the family:	Total	1145
		Male	869
		Female	276
	Attending school		
	Not Attending school	Total	788
		Male	121
		Female	667
2.2	Adult Literacy (above 15): Literate persons in the family	No of families	885
		Total literate persons	580
		Male	562
		Female	18
3	Training & Skills		
3.1	Any professional or technical training among in family members	No of persons who took the trainings	187
		Male	187
		Female	0
		1. Health	6
		2. Engineering	32
		3. Agriculture	82
		4. Education	40
		5. Civil	48
		6. Military	39
7. Others	9		
3.2	Skilled persons in the family	No of skilled persons	486
		Male	203
		Female	283
		1. Carpenter	30
		2. Sew/Tailor	245
		3. Mechanic	98
		4. Others	79

4	Water		
4.1	Family has access to potable water throughout the year	No of families	885
		If yes, 1. River	0
		2. S. well	476
		3. Pond	0
		4. HP/TW	276
		5. Piped water	0
		6. Other	133
4.2	Sufficient water for domestic use is available throughout the year	Yes	547
		No	338
5	Housing & Environment		
5.1	Do you own the house?	Yes	665
		If no, Rented	121
		Other	99
5.2	No. of living houses	Number	290
5.3	Do the house has separate ventilated kitchen?	Yes	118
		No	172
5.4	Is the house electrified?	Yes	103
		No	175
5.5	Is there any specific shower in the households?	Yes	14
		No	276
5.6	Is there a sanitary latrine in the house?	No of households	290
		If yes, 1. VIP	8
		2. WC	57
		3. Traditional	225
5.7	Do you have and use garbage container?	Yes	44
		No	246
5.8	Does wastewater stagnate around the vicinity of your house?	Yes	102
		No	188
5.9	Do you have modern appliances in your house?	No of houses	290
		If yes, 1. Radio	515
		2. Audio player	272
		3. Television	50
		4. Refrigerator	6
		5. Other	42
6	Land holding and Irrigation		
6.1	Do you own agricultural land?	No of households	290
		Yes	84
		No	206
6.2	Do the households use a reliable method for irrigation?	No	71
		Yes, Type	13
6.3	Do the households use better quality of seeds in agriculture?	Yes	19
		No	75
6.4	Do the households seek technical guidance of experts for agriculture?	Yes	8
		No	76
7	Livestock & Poultry		
7.1	Do the households raise livestock and dairy animals?	No of households	290
		If yes, 1. Cows	22
		2. Buffaloes	0
		3. Sheep	48
		4. Goats	12
		5. Camels	0
		6. Other	16

7.2	Do the households keep poultry?	No of household	290
		If yes, household Use	282
		Commercial	9
8	Means of livelihood		
8.1	Are there any means of livelihood of the households?	No households	290
		If yes, 1, Agriculture	81
		2.Livestock	51
		3.Small trades	35
		4.Skilled/tech	63
		5. Employment	48
		6. Labor	227
	7. Other	38	
8.2	Does the family earn more than 30 US\$ in a month?	No of families	885
		Yes	634
		No	251
8.3	Are there any unemployed (adults) people in the family?	Adult population	2778
		Male	438
		Female	1376
9	Food, Nutrition and Growth Monitoring		
9.1	Do family members eat the necessary food items at least twice a week?	No of families	885
		Yes, meat, fish, eggs or milk	431
		Fruits or vegetables	461
9.2	How many under2 year children have been breast-fed?	Total number of under 2 years children	683
		<6 M	211
		>6 M	378
9.3	How many under1 year children were weighed at birth?	Number weighed	39
		Normal (>2.5 kg)	36
		LBW (<2.5 kg)	3
9.4	How many children 0-<5 years of age are growing normally?	Number (Normal)	843
		Number (Abnormal)	861
9.5	How many children 5-<15 years of age are growing normally?	Number (Normal)	1488
		Number (Abnormal)	445
10	Health		
10.1	How many children were born in these households during the past 12 months?	Number	365
10.2	How many stillbirths during the past 12 months?	Number	15
10.3	How many children born with congenital problems?	Number	3
		1. Physical	1
		2. Mental	2
		3. Visual	0
10.4	How many children of less than one-year age died in the past 12 months?	If yes, number	12
		Age at death	
		1. NT	0
		2. ARI	1
		3. Diarrhea	3
	4. Other	8	
10.5	How many children 1-<5 years of age died in the past 12 months?	Number	10
		Age at death	
		1. ARI	2
		2. Diarrhea	4
	3. Other	4	
10.6	Are the children under one year of age vaccinated?	Number of children	362
		If yes, Completed-number	103

		Not Completed-number	259
10.7	Are there any pregnant women living in this house at this time?	No of CBA women	1217
		No of pregnant	240
		Last Trimester	82
10.8	How many of the pregnant women have been vaccinated against tetanus (T2+)?	Number	68
10.9	Has the pregnant women been examined by trained health worker during pregnancy (ANC)?	No of pregnant	240
		Yes	78
		No	162
10.1	How many deliveries trained health staff has assisted?	Total Number	76
		1. CHC , BHC or SHC	38
		2. CHW	5
		3. Private clinic	9
		4.PH and Bayat Maternity Center	22
10.11	Have the mothers been attended by a health worker or trained THW at-least once within six weeks after delivery?	Yes	32
		No	208
10.12	How many pregnant women have died due to pregnancy during the past 12 months	Number	9
10.13	How many couples in your family use family planning methods?	Total Number	116
		If Yes, 1. Condom	18
		2. Pills	79
		3. I.U.D	4
		4. Other	15
10.14	Are there family members suffering from any chronic disease?	No of total families	885
		If Yes, Number?	58
10.15	Are there family members suffering from any disability?	No of total families	885
		If Yes, Number?	33
		1. Physical	21
		2. Mental	11
		3. Vision	1

Anex-4

The Bellow tables show the 2nd survey's (after nine months of the BDN program implantation) summary of Safian village Lashkergah district of Helmand Province in May.2017.

Q.No.	Question	Answer	G.Total
1	Demographic Data		
1.0	Total number of Families in the cluster		938
1.1	Family members	Total	6797
		Male	3471
		Female	3326
	Children < 1 year	Total	368
		Male	186
		Female	182
	Children 1-<5 years	Total	1277
		Male	697
		Female	580
	Children 5-<15 years	Total	1975
		Male	1005
		Female	970
	Adults 15-<45 years	Total	2506
		Male	1264
		Female	1242

	Adults 45-<60 years	Total	531
		Male	240
		Female	291
	Elderly above 60 years	Total	140
		Male	79
		Female	61
1.2	Married couples in the family	No of families	938
		No of the couples in Families	939
2	Education & Literacy		
2.1	School age children (5-<15) in the family:	Total	1203
		Male	907
		Female	296
		Attending school	
		Not Attending school	
		Total	772
		Male	111
		Female	661
2.2	Adult Literacy (above 15): Literate persons in the family	No of families	938
		Total literate persons	593
		Male	571
		Female	22
3	Training & Skills		
3.1	Any professional or technical training among in family members	No of persons who took the trainings	295
		Male	261
		Female	34
		1. Health	36
		2. Engineering	32
		3. Agriculture	102
		4. Education	40
		5. Civil	54
		6. Military	41
		7. Others	59
3.2	Skilled persons in the family	No of skilled persons	591
		Male	288
		Female	313
		1. Carpenter	35
		2. Sew/Tailor	275
		3. Mechanic	98
		4. Others	139
4	Water		
4.1	Family has access to potable water throughout the year	No of families	938
		If yes, 1. River	0
		2. S. well	449
		3. Pond	0
		4. HP/TW	382
		5. Piped water	0
		6. Other	113
4.2	Sufficient water for domestic use is available throughout the year	Yes	637
		No	301
5	Housing & Environment		

5.1	Do you own the house?	Yes	715
		If no, Rented	126
		Other	97
5.2	No. of living houses	Number	306
5.3	Do the houses have separate ventilated kitchen?	Yes	142
		No	164
5.4	Is the house electrified?	Yes	132
		No	174
5.5	Is there any specific shower in the households?	Yes	30
		No	274
5.6	Is there a sanitary latrine in the house?	No of households	306
		If yes, 1. VIP	15
		2. WC	78
		3.Traditional	213
5.7	Do you have and use garbage container?	Yes	78
		No	228
5.8	Does wastewater stagnate around the vicinity of your house?	Yes	136
		No	170
5.9	Do you have modern appliances in your house?	No of houses	306
		If yes, 1. Radio	508
		2.Audio player	288
		3.Television	74
		4.Refrigerator	13
		5.Other	53
6	Land holding and Irrigation		
6.1	Do you own agricultural land?	No of households	306
		Yes	88
		No	218
6.2	Do the households use a reliable method for irrigation?	No	69
		Yes, Type	19
6.3	Do the households use better quality of seeds in agriculture?	Yes	26
		No	62
6.4	Do the households seek technical guidance of experts for agriculture?	Yes	13
		No	75
7	Livestock & Poultry		
7.1	Do the households raise livestock and dairy animals?	No of households	306
		If yes, 1.Cows	30
		2.Buffaloes	0
		3.Sheep	51
		4.Goats	17
		5. Camels	0
		6.Other	19
7.2	Do the households keep poultry?	No of household	306
		If yes, household Use	296
		Commercial	15
8	Means of livelihood		
8.1	Are there any means of livelihood of the households?	No households	306
		If yes, 1, Agriculture	86
		2.Livestock	58
		3.Small trades	42
		4.Skilled/tech	72
		5. Employment	51
		6. Labor	249

		7. Other	82
8.2	Does the family earn more than 30 US\$ in a month?	No of families	938
		Yes	723
		No	215
8.3	Are there any unemployed (adults) people in the family?	Adult population	2838
		Male	412
		Female	1365
9	Food, Nutrition and Growth Monitoring		
9.1	Do family members eat the necessary food items at least twice a week?	No of families	938
		Yes, meat, fish, eggs or milk	486
		Fruits or vegetables	522
9.2	How many under2 year children have been breast-fed?	Total number of under 2 years children	781
		<6 M	227
		>6 M	348
9.3	How many under1 year children were weighed at birth?	Number weighed	92
		Normal (>2.5 kg)	87
		LBW (<2.5 kg)	5
9.4	How many children 0-<5 years of age are growing normally?	Number (Normal)	923
		Number (Abnormal)	722
9.5	How many children 5-<15 years of age are growing normally?	Number (Normal)	1573
		Number (Abnormal)	402
10	Health		
10.1	How many children were born in these households during the past 12 months?	Number	373
10.2	How many stillbirths during the past 12 months?	Number	12
10.3	How many children born with congenital problems?	Number	1
		1. Physical	1
		2. Mental	0
		3. Visual	0
10.4	How many children of less than one-year age died in the past 12 months?	If yes, number	6
		Age at death	
		1. NT	0
		2. ARI	1
		3. Diarrhea	1
4. Other	4		
10.5	How many children 1-<5 years of age died in the past 12 months?	Number	8
		Age at death	
		1. ARI	1
		2. Diarrhea	2
3. Other	5		
10.6	Are the children under one year of age vaccinated?	Number of children	368
		If yes, Completed-number	149
		Not Completed-number	219
10.7	Are there any pregnant women living in this house at this time?	No of CBA women	1242
		No of pregnant	253
		Last Trimester	84
10.8	How many of the pregnant women have been vaccinated against tetanus (T2+)?	Number	88
10.9	Has the pregnant women been examined by trained health worker during pregnancy (ANC)?	No of pregnant	253
		Yes	107
		No	146
10.1	How many deliveries trained health staff has assisted?	Total Number	107
		1. CHC , BHC or SHC	51

		2. CHW	4
		3. Private clinic	7
		4. PH and Bayat Maternity Center	45
10.11	Have the mothers been attended by a health worker or trained THW at-least once within six weeks after delivery?	Yes	66
		No	187
10.12	How many pregnant women have died due to pregnancy during the past 12 months	Number	7
10.13	How many couples in your family use family planning methods?	Total Number	197
		If Yes, 1. Condom	39
		2. Pills	122
		3. I.U.D	8
		4. Other	28
10.14	Are there family members suffering from any chronic disease?	No of total families	938
		If Yes, Number?	60
10.15	Are there family members suffering from any disability?	No of total families	938
		If Yes, Number?	32
		1. Physical	21
		2. Mental	10
		3. Vision	1