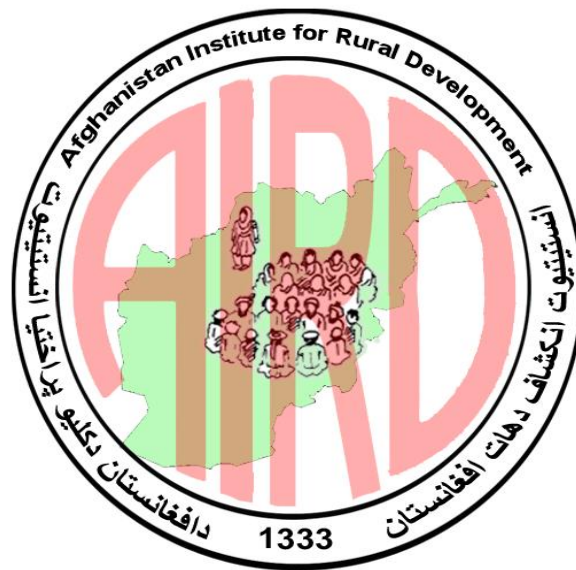




**STUDY REPORT**  
**ON**  
**IDENTIFICATION OF TECHNOLOGIES FOR**  
**RURAL TECHNOLOGY PARK**



**Rural Technology Park**  
**Afghanistan Institute of Rural Development**  
**(Ministry of Rural Rehabilitation & Development)**  
**Kabul, Afghanistan**

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## REPORT AT A GLANCE

1	Study report on	<i>Identification of Technologies for Rural Technology park, Kabul, Afghanistan</i>
2	Study Area	Balkh, Bamyán, Ghazni, Kandahar & Nangarhar provinces of Afghanistan
3	No. of districts covered	33
4	Survey conducted	May 2010
5	Sample size	725 respondents
6	Sample used for analysis	225 respondents
7	Category of respondents	Artisans/SHGs/Entrepreneurs, Govt. organization and NGOs.
8	Sectors identified for the study	Small & Medium Enterprises, Renewable Energy and Water supply & Sanitation.
9	Number of technologies identified	264
10	Number of Technologies Prioritized	40
11	Project Team Advisor	Mr. Ajmal Shirzai
12	Data collected by	RTP team along with 30 Social Workers
13	Data compilation	Mr. Hidayatullah Safi Mr. Sayed Fakhruddin Mr. Sayed Nasrat Sadat Mr. Muhammad Daud Ahmedzai
14	Study Report Prepared by	Dr. S Senthil Vinayagam Dr. R M Prasad Mr. Hidayatullah Mr. B N Mani
15	Date of submission of the report	14 <sup>th</sup> August 2010

# **A STUDY ON IDENTIFICATION OF TECHNOLOGIES FOR RURAL TECHNOLOGY PARK AT KABUL**

## **1. INTRODUCTION**

It has been realized that development in any country is possible, when its majority of population living in rural areas become part of the growth process. Development of rural infrastructure and expansion of both farm and non-farm economy is the only way forward to achieve such an inclusive growth. Afghanistan which is moving from the period of reconstruction into development requires an integrated and comprehensive programs and strategies. Comprehensive rural development identified as one of the main approaches towards achieving the objectives of reducing poverty, expand employment and enterprises creation and enhancing livelihood opportunities in the region to improve the wellbeing of all Afghans and particularly those living in the rural areas. To address the above issue, identification and transfer of existing rural technologies available in Afghanistan and other countries will have a great potential to enhance the livelihood of Afghan population living in the rural areas. Therefore, it is suggested that a platform can be created to show case a large number of rural technologies for its demonstration, dissemination, adoption to benefit a larger group of people. This platform can be called as Rural Technology Park.

The Rural Technology Park would lay emphasis on the introduction of appropriate technological inputs for improving the productivity and quality of farm and non-farm sectors, introduction of new livelihood options, skill enhancement and capacity building, better use of local resources with concurrent energy and eco-management, development of management and entrepreneurial skills, introduction of new and innovative technologies those have been developed by young and rural entrepreneurs etc. There is a huge scope for delivering such interventions as has been amply demonstrated by experts in several cases. It is sincerely envisaged that the establishment of such “Rural Technology Park” would go a long way in creating concrete and tangible socio-economic benefits for the rural people through providing new technological solutions, training for capacity & skill development, and support for their implementation.

Realizing the need of RTP in Afghanistan, the Spanish Agency for International Development Cooperation (AECID), Afghanistan provided financial assistance to MRRD/AIRD towards Establishment of Rural Technology Park in Kabul with the objective to spread awareness and promote the concept of transfer of appropriate rural technologies to the rural mass with the support of Entrepreneurs, Technology developers, technocrats & NGOs through various extension

Methods. The experience of rural technology park at NIRD, Hyderabad, India will be utilized in the process of establishment of RTP at Kabul, Afghanistan.

## **2. Back Ground of the Study**

### **A. Consultative Workshop**

Keeping the importance of the above the AIRD signed an MOU with NIRD-Hyderabad for its collaboration in the process of RTP establishment. Accordingly, the DG, NIRD & faculty NIRD visited Kabul for briefing the importance of RTP in Kabul during the National Consultative Workshop on establishment of RTP in Kabul on 12<sup>th</sup> Dec 2009 followed by discussion with various development agencies of Afghanistan for their support in the functioning.

### **B. Institutional Attachment**

In continuation of the workshop, the RTP officials of AIRD, Kabul have undergone Institutional attachment training at RTP, NIRD, Hyderabad during Jan – Feb 2010. This exposure has helped them to understand about the functioning of RTP, transfer of technology process, identification of technologies for RTP, steps to be taken to mobilize the beneficiaries and the importance of public private partnership in achieving the RTP objectives. The visit also given an in-depth analysis on requirement of the technologies for Afghanistan, accordingly the team proposed few technologies to be imported from India.

### **C. Workshop on Documentation of Rural Technologies:**

To document the existing rural technologies in the five provinces out of 34 in Afghanistan, a three days workshop was organized at AIRD, Kabul during April 22-25, 2010 by the NIRD faculty. The following are the workshop objectives:

- To orient the participants on the concept and process of establishment of RTP.
- To make the participants to understand the process of collecting data for documentation of existing technologies.
- To enable the participants to develop a directory of rural technologies after proper assessment, prioritization and capacity building.

There were 30 social workers participated in the workshop representing the five provinces namely Balkh, Bamyán, Ghazni, Kandahar and Nangarhar. The participants were oriented on importance of RTP, technology transfer and method of data collection, identification of technologies for which a questionnaire was prepared using a brain storming exercise.

The 30 social workers have been divided in to five groups to collect the data from the five provinces. In each province it is proposed to collect the required information as per the questionnaire from six districts excluding the provincial capital. The questionnaire was divided into four parts as mentioned below:

- i) General Information
- ii) Artisans, SHG Members, and Entrepreneurs
- iii) Private Organizations / NGOs
- iv) Government Organization

#### D. Outcome of the workshop

To facilitate the social workers, the questionnaire was prepared in Dari language. The data collection process has been initiated from first week of May 2010 and completed by the end of the month. The total number of respondents covered during the survey is 725 and the number of technologies recorded is 264. The following are the details of the collected data.

<i>Sl.</i>	<i>Provinces</i>	<i>Districts</i>	<i>No. of respondents</i>	<i>No. of Technologies recorded</i>
1	Balkh	Nehr-e-Shahi, Kshindey Sholgara Shortepa Dawlatabad Dehdadi, Mazar-e-sherif	124	43
2	Bamyan	Yakawlang, Sheber, Panjab, Waras Saighan, Khamard & Bamyan city	182	40
3	Ghazni	Khowja Omari, Dehyak, Jaghato & Ghazni	161	74
4	Kandahar	Dand, Daman, Arghandab, Arghistan Takhtapol, Spin Boldak and Kandahar city	130	54
5	Nangahar	Koz Kunar, Di Bhla, Rodaat, Kama Batikot, Surkhod & Jalalabad city	128	53
<b>Total</b>			<b>725</b>	<b>264</b>

To prioritize the technologies from the listed technologies (264) the statistical tools namely Mean and Standard Deviation have been used. Based on the statistical analysis 62 technologies identified and the following are the province wise list of prioritized technologies.

<i>Balkh (5)</i>	<i>Bamyan (5)</i>	<i>Ghazni ( 20)</i>	<i>Kandahar (18)</i>	<i>Nangarhar(14)</i>
Tailoring	MHP	Embroidery	Micro Hydro Power	Solar
Oil Extraction	Solar	Carpet weaving	Raisin Making	Carpet Weaving
Solar Power	Rug Weaving	Tailoring	Hand Pump	MHP
Fertilizers	Water Mill	PCC blocks making	Submersible Pump	Tailoring
M H P	Carpentry	Water mill and MHP	Bakery (Kulchy)	Carpentry
		Bitumen making unit	Pomegranate Jam	Hand Pump
		Carpentry	Pottery	Embroidery
		Fruit & vegetable process	Shoe Making	Steel works
		Hand Pump installation	Solar panel	Chapel making
		Local latrines	Embroidery	Furniture
		Plaster production	Grapes Jam	Pottery
		Rubber bucket making	Rug (Gilam)	Cake making
		Solar cooker	Sweets (Nuqal)	Food Processing
		Spice making	Vinegar Making (Sirka)	Oil Extraction
		Jewellery	Water Mill	
		Plough and blade	Apricot Drying	
		Pottery	Tailoring	
		Smith	Tomato Paste	
		Soap making unit		
		Water tanker making		

### **3. A brief profile on five Provinces:**

#### **BALKH:**

This province is in the north of Afghanistan has high potential in Agriculture sector as it has high fertile land. It obtains abundant water resources from Bamyan to grow horticulture, field crops & livestock. Oil seed production and revival of silk are being revived in Balkh. The academy in Balkh is based on a mix of agriculture, SME and services. The provincial capital is Mazar-e-sharif, which is an attractive historical site. This province is covered with 15 districts.

#### **BAMYAN:**

Bamyan is one of the poorest most mountainous and agriculturally least productive areas in the country the literacy rate in Bamyan is also low. The main crops grown in this province are Wheat, Barley, Beans and Potatoes with less marketing outlets. Livestock and construction industry are the most potential enterprises for future development in this province. There are several sectors which show potential for development if they receive sufficient technologies on horticulture, carpet weaving and handicrafts. This province is covered with 7 districts.

#### **GHAZANI**

The province lies on the important Kabul to Kandahar road, and has historically functioned as an important trade center between those two major cities. It has no significant natural resources. The crops grown in this province are grapes, apricot, apples, plum, almond, walnut, maize, barley, wheat and chickpea. Blacksmith and coppersmith were common professions in this province. Trade in wool and poplar wood for construction is very common in this province. This province is covered with 19 districts.

#### **KANDAHAR**

Kandahar is having potential for water resources and gypsum mines but it has suffered badly from lack of skilled and educated human resources. It is famous for orchards, and field crops apart from Poppy. The main field crop is wheat followed by maize green gram and okra. The wool, skin & intestines of live stocks and the processed raisins are the main business. This province is covered with 16 districts.

#### **NANGARHAR**

This province is located in the eastern Afghanistan and endowed with a lot of natural resources. Jalalabad is the provincial capital and major centre of business covered with 22 districts. This province is called as food basket for whole of Afghanistan as most of the crops produced here are consumed in different parts of the province. Due to abundant water resources, there is huge potential for fishery sector. The people are undertaking business activities in timbers, gold, pharmaceuticals and others.

#### 4. Data Compilation & Survey report

As the data were collected by different groups of social workers in different provinces it is observed that there were duplication of technologies recorded out of 264 technologies during the survey. Therefore, the compilation of data has been done by eliminating the repeated technologies. In result of that the data were analyzed using the responses of 225 respondents only.

The details of the breakup of the respondents used for data analysis are presented below:

<i>Sl.</i>	<i>Provinces</i>	<i>Break-up of respondents</i>			<i>Total</i>
		<i>Artisan/SHG/ Entrepreneurs</i>	<i>Govt. Organisations</i>	<i>NGOs</i>	
1	Balkh	36	02	02	40
2	Bamyan	35	02	03	40
3	Ghazni	42	04	04	50
4	Kandahar	42	01	-	43
5	Nangarhar	45	06	01	52
	<b>TOTAL</b>	<b>200</b>	<b>15</b>	<b>10</b>	<b>225</b>

## **5. PROVINCE - WISE RESPONDENTS PROFILE**

The data collected from each province has been compiled and tabulated as given below:

### **A) BALKH**

<i>Sl</i>	<i>Particulars</i>	<i>Category of Enterprise</i>			<i>Total</i>
		<i>SME</i>	<i>Renewable Energy</i>	<i>Water &amp; Sanitation</i>	
1	Artisans/SHGs/Entrepreneurs	32	02	02	36
2	NGOs	2	-	-	02
3	GOs	-	1	1	02
	Total	34	3	3	40

### **LIST OF TECHNOLOGIES DOCUMENTED FOR ANALYSIS**

#### **SMALL AND MEDIUM ENTERPRISE**

Aikal Tarashi	Palting (Halabi Sazi)
Bag Making (Jawal Sazi)	Plaster of Paris as Building Decoration
Bakery	Pottery
Bee Keeping	Raisin Cleaning
Casting (Towleed Cherm)	Rug Making (Geelam bafi)
Charma Kari	Shawl Making
Copper Works	Sweets Production (Musk Melon & Water Melon)
Cotton Production	Tailoring
Diesel & Electric Turbine Production	Cold Drinks Production
Female Tailoring	Tomato Ketchup
Fertilizers Production	Traditional Jewellery
Fisheries	Water Mill
Fruit Drying	Wood Works
Ginning Machine	Wool Making
Guldozi	Wool String Making (Pasham Reshi)
Hand Pump Making	Chapel Making
Metal Works	
Oil extraction (Sun Flower)	

#### **Water & Sanitation**

Pipe Scheme  
Water Reservoir

#### **Renewable Energy**

MHP  
Wind Power  
Solar

Responses of respondents in **BALKH** province with regard to SMEs, RE and W&S

Sl	Particulars	Artisans (n = 36)		NGOs (n = 2)		GOs (n = 2)	
		Yes	No.	Yes	No	Yes	No
1	Skill training undergone	36	--	NA	NA	NA	NA
2	Training provided by						
	a) Family members	08	-	NA	NA	NA	NA
	b) Others	13	-	NA	NA	NA	NA
	c) None	15	-	NA	NA	NA	NA
3	Ability to provide trg.	36	-	NA	NA	NA	NA
4	No. of trainers available	08	28	NA	NA	NA	NA
5	Need of skill training	35	1	NA	NA	NA	NA
6	Awareness on Govt. schemes	02	34	NA	NA	NA	NA
7	Awareness on Pvt. Org.	01	35	NA	NA	NA	NA
8	Awareness on NGOs	05	31	NA	NA	NA	NA
9	Availability of Raw materials	22	14	02	--	--	02
10	Status of technology						
	a) Commercial	33	-	02	--	--	--
	b) Trial basis	03	-	--	--	02	--
11	Acceptability of technology						
	a) High	35	-	02	--	02	--
	b) Medium	01	-	--	--	--	--
	c) Low	--	-	--	--	--	--
12	Location specific technology	10	26	--	02	02	--
13	Gender based technology	18	18	--	02	--	02
14	Availability of IEC materials for TOT	04	32	02	--	--	02
15	TOT methods used	NA	NA				
	a) Training			02	--	02	--
	b) Workshop			--	--	01	--
	c) Mass media			--	--	--	--
	d) Demonstration			02	--	02	--
16	Usefulness of the tech.	NA	NA			NA	NA
	a) Improving the quality of life			01	--		
	b) Increasing efficiency of product			01	--		
	c) In generating more income			--	--		

B) **BAMYAN** province

<i>Sl</i>	<i>Particulars</i>	<i>Category of Enterprise</i>			<i>Total</i>
		<i>SME</i>	<i>Renewable Energy</i>	<i>Water &amp; Sanitation</i>	
1	Artisans/SHGs/Entrepreneurs	29	03	03	35
2	NGOs	02	-	01	03
3	GOs	01	01	--	02
	Total	32	04	04	40

**LIST OF TECHNOLOGIES DOCUMENTED FOR ANALYSIS****SMALL AND MEDIUM ENTERPRISE**

Bee keeping	Process of dry apricot
Carpentry	Process of yogurt ball
Curtain	Raw material
Diary	Repairing mobile
Goldsmith	Rug weaving
Greenhouse	Smith
Herbal Medicine	Tomato past
Jardiniere	Weaving cap
Leaf	Weaving of embroidery
Mashk Dasti Machine	Weaving of mashoo
National wad	Weaving of nick
Panel (pallan)	Weaving shawl
Potato storage	Water mill
Plough	Fruit process
Pottery	Hot storage
Poultry	Cold storage and keeping of potato

**Water & Sanitation**

Hand pump  
Pipe scheme  
Water pulley  
Making water filter

**Renewable energy**

MHP  
Wind energy  
Solar

Responses of respondents in **BAMYAN** province with regard to SMEs, Renewable energy and Water& Sanitation

SI	Particulars	Artisans (n = 35)		NGOs (n = 3)		GOs (n = 2)	
		Yes	No.	Yes	No	Yes	No
1	Skill training undergone	17	18	NA	NA	NA	NA
2	Training provided by a) family members	--	--	NA	NA	NA	NA
	b) Others	22	-	NA	NA	NA	NA
	c) None	13	--	NA	NA	NA	NA
3	Ability to provide trg.	30	05	NA	NA	NA	NA
4	No. of trainers available	25	10	NA	NA	NA	NA
5	Need of skill training	26	09	NA	NA	NA	NA
6	Awareness on Govt. schemes	08	27	NA	NA	NA	NA
7	Awareness on pvt. Organizations	02	33	NA	NA	NA	NA
8	Awareness on NGOs	11	24	NA	NA	NA	NA
9	Availability of Raw materials	22	13	03	--	01	01
10	Status of technology						
	a) Commercial	08	-	--	--	02	--
	b) Trial basis	27	--	03	--	--	--
11	Acceptability of technology						
	a) High	18	--	02	--	02	--
	b) Medium	03	-	01	--	--	--
	c) Low	14	-	--	--	--	--
12	Location specific technology	13	22	01	02	--	02
13	Gender based technology	01	34	--	03	--	02
14	Availability of IEC materials for TOT	01	34	--	03	01	01
15	TOT methods used	NA	NA				
	a) Training	--	--	03	--	01	--
	b) Workshop	--	--	--	--	01	--
	c) Mass media	--	--	--	--	--	--
	d) Demonstration	--	--	02	--	01	--
16	Usefulness of the tech.	NA	NA			NA	NA
	a) In improving the quality of life	--	--	01	--	--	--
	b) In increasing efficiency of product	--	--	--	--	--	--
	c) In generating more income	--	--	02	--	--	--

## C) GHAZNI province

Sl	Particulars	Category of Enterprise			Total
		SME	Renewable Energy	Water & Sanitation	
1	Artisans/SHGs/Entrepreneurs	35	04	03	42
2	NGOs	01	-	03	04
3	GOs	02	--	02	04
	Total	38	04	08	50

**LIST OF TECHNOLOGIES DOCUMENTED FOR ANALYSIS****SMALL AND MEDIUM ENTERPRISE**

Boiler	Pottery
Car workshop	Hand craft
Carpentry	PCC slab
Carpet weaving	Sanitation
Cleaning the water canals machine	Shawl weaving
Diesel generator energy	Shoes making
Embroidery	Smithy
Fruit and vegetable process	Soap Company
Hand craft	Tailoring
Herbal technology	Tinsmith (halabi sazi)
Jewellery	Tomato past
Lobber bucket	Wad weaving
Making boiler	Water storage
Mosaic	Plough blade
Plaster of Paris	
<b>Water &amp; Sanitation</b>	<b>Renewable energy</b>
Sanitation	Water mill
Hand pump	Solar panal
Making boiler	MHP

Responses of respondents in **GHAZNI** province with regard to SMEs, Renewable energy and Water& Sanitation

Sl	Particulars	Artisans (n = 42)		NGOs (n = 4)		GOs (n = 4)	
		Yes	No.	Yes	No	Yes	No
1	Skill training undergone	27	15	NA	NA	NA	NA
2	Training provided by		--	NA	NA	NA	NA
	a) family members	--					
	b) Local trainer	26	-	NA	NA	NA	NA
	c) None	16	--	NA	NA	NA	NA
3	Ability to provide trg.	34	08	NA	NA	NA	NA
4	No. of trainers available	11	31	NA	NA	NA	NA
5	Need of skill training	25	17	NA	NA	NA	NA
6	Awareness on Govt. schemes	--	42	NA	NA	NA	NA
7	Awareness on pvt. Organizations	--	42	NA	NA	NA	NA
8	Awareness on NGOs	08	34	NA	NA	NA	NA
9	Availability of Raw materials	21	21	--	04	03	01
10	Status of technology						
	a) Commercial	31	--	02	--	03	--
	b) Trial basis	11	--	02	--	01	--
11	Acceptability of technology						
	a) High	35	--	02	--	02	--
	b) Medium	05	--	01	--	02	--
	c) Low	02	--	01	--	--	--
12	Location specific technology	04	38	02	02	--	04
13	Gender based technology	04	38	01	03	02	02
14	Availability of IEC materials for TOT	01	41	01	03	01	03
15	TOT methods used	NA	NA				
	a) Training	--	--	04	--	04	--
	b) Workshop	--	--	03	--	--	--
	c) Mass media	--	--	--	--	--	--
	d) Demonstration	--	--	--	--	--	--
16	Usefulness of the tech.	NA	NA			NA	NA
	a) In improving the quality of life	--	--	04	--	--	--
	b) In increasing efficiency of product	--	--	--	--	--	--
	c) In generating more income	--	--	04	--	--	--

D) **KANDAHAR** province

<i>Sl</i>	<i>Particulars</i>	<i>Category of Enterprise</i>			<i>Total</i>
		<i>SME</i>	<i>Renewable Energy</i>	<i>Water &amp; Sanitation</i>	
1	Artisans/SHGs/Entrepreneurs	36	03	03	42
2	NGOs	--	--	--	--
3	GOs	01	--	--	01
	Total	37	03	03	43

**LIST OF TECHNOLOGIES DOCUMENTED FOR ANALYSIS****SMALL AND MEDIUM ENTERPRISE**

Acid making  
 Anar dana  
 Apricot drying  
 Apricot juice  
 Bakery  
 Gabion net  
 Embroidery  
 Fisheries  
 Grapes jam  
 Green house  
 Making fertilizer  
 Mosquito net  
 Plum drying  
 Pomegranate jam  
 Pottery  
 Raisin (*Aab Josho Yekhawalo Markez*)  
 Raisin Making  
 Rug weaving

Shoe making  
 Soap making  
 Steel works  
 Stone beads making  
 Sweets  
 Tomato paste  
 Tailoring  
 Vegetable drier  
 Vinegar production  
 Wad ( Namad )  
 ORS  
 Water mill  
 Water reservoir  
 Wheat storage  
 White water pets  
 Wool making

**Water & Sanitation**

Hand Pump  
 Submergible water pump  
 Pipe scheme

**Renewable Energy**

MHP  
 Solar

Responses of respondents in **KANDAHAR** province with regard to SMEs, Renewable energy and Water& Sanitation

Sl	Particulars	Artisans (n = 42)		NGOs (n = 0)		GOs (n = 1)	
		Yes	No.	Yes	No	Yes	No
1	Skill training undergone	23	19	NA	NA	NA	NA
2	Training provided by		--	NA	NA	NA	NA
	a) family members	11					
	b) Local trainer	18	-	NA	NA	NA	NA
	c) None	13	--	NA	NA	NA	NA
3	Ability to provide trg.	40	02	NA	NA	NA	NA
4	No. of trainers available	27	15	NA	NA	NA	NA
5	Need of skill training	41	01	NA	NA	NA	NA
6	Awareness on Govt. schemes	15	27	NA	NA	NA	NA
7	Awareness on pvt. Organizations	--	42	NA	NA	NA	NA
8	Awareness on NGOs	15	27	NA	NA	NA	NA
9	Availability of Raw materials	30	12	--	--	--	01
10	Status of technology						
	a) Commercial	40	--	--	--	01	--
	b) Trial basis	02	--	--	--	--	--
11	Acceptability of technology						
	a) High	39	--	--	--	01	--
	b) Medium	03	--	--	--	--	--
	c) Low	--	--	--	--	--	--
12	Location specific technology	20	22	--	--	--	01
13	Gender based technology	16	26	--	--	01	--
14	Availability of IEC materials for TOT	01	41	--	--	--	01
15	TOT methods used	NA	NA				
	a) Training	--	--	--	--	01	--
	b) Workshop	--	--	--	--	--	--
	c) Mass media	--	--	--	--	--	--
	d) Demonstration	--	--	--	--	--	--
16	Usefulness of the tech.	NA	NA			NA	NA
	a) In improving the quality of life	--	--	--	--	--	--
	b) In increasing efficiency of product	--	--	--	--	--	--
	c) In generating more income	--	--	--	--	--	--

## E) NANGARHAR Province

Sl	Particulars	Category of Enterprise			Total
		SME	Renewable Energy	Water & Sanitation	
1	Artisans/SHGs/Entrepreneurs	38	04	03	45
2	NGOs	--	01	--	01
3	GOs	02	01	03	06
	Total	40	06	06	52

**LIST OF TECHNOLOGIES DOCUMENTED FOR ANALYSIS****SMALL AND MEDIUM ENTERPRISE**

Brown sweet Machine	Fruits Storage
Cotton Ginner	Furniture
Aluminium Pot making	Ice Production
Aluminium works	Marble Production
Bee keeping	Metallic Templeting
Brick making	Oil extraction (Mustard)
Cake, Basket making Machine	Packages
Cap Weaving Machine	Pop Corn machine
Carpentry Machine	Potato Chips making machine
Carpet Weaving	Pottery
Chapel making Machine	Pressure cooker making
Chicken food Mill	Rug weaving
Embroidery	Shawl weaving
Fabric making	Shoe making Machine
Fabric Making Machine	Steel working Machine
Food Processing (Tomato, Acid, jam)	Sweet making (Chocolate)
Frame making Machine of (shawl, Scarf and carpet)	Tailoring Machine
	Olive Oil Extraction
<b>Water &amp; Sanitation</b>	<b>Renewable Energy</b>
Latrines	Horizontal MHP
Hand Pump	MHP
Water Mill	Vertical MHP
Pipe Scheme	Solar
	Biogas

Responses of respondents in **NANGARHAR** province with regard to SMEs, Renewable energy and Water& Sanitation

Sl	Particulars	Artisans (n = 45)		NGOs (n = 1)		GOs (n = 6)	
		Yes	No.	Yes	No	Yes	No
1	Skill training undergone	43	02	NA	NA	NA	NA
2	Training provided by		--	NA	NA	NA	NA
	a) family members	11					
	b) Local trainer	32	-	NA	NA	NA	NA
	c) None	02	--	NA	NA	NA	NA
3	Ability to provide trg.	43	02	NA	NA	NA	NA
4	No. of trainers available	31	14	NA	NA	NA	NA
5	Need of skill training	38	07	NA	NA	NA	NA
6	Awareness on Govt. schemes	19	26	NA	NA	NA	NA
7	Awareness on pvt. Organizations	03	42	NA	NA	NA	NA
8	Awareness on NGOs	13	32	NA	NA	NA	NA
9	Availability of Raw materials	14	31	--	01	01	05
10	Status of technology						
	a) Commercial	45	--	01	--	06	--
	b) Trial basis	--	--	--	--	--	--
11	Acceptability of technology						
	a) High	41	--	01	--	06	--
	b) Medium	04	--	--	--	--	--
	c) Low	--	--	--	--	--	--
12	Location specific technology	10	35	01	--	04	02
13	Gender based technology	02	43	--	01	--	06
14	Availability of IEC materials for TOT	05	40	--	01	01	05
15	TOT methods used	NA	NA				
	a) Training	--	--	01	--	02	--
	b) Workshop	--	--	--	--	04	--
	c) Mass media	--	--	--	--	--	--
	d) Demonstration	--	--	--	--	01	--
16	Usefulness of the tech.	NA	NA			NA	NA
	a) In improving the quality of life	--	--	01	--	--	--
	b) In increasing efficiency of product	--	--	--	--	--	--
	c) In generating more income	--	--	--	--	--	--

## 6. Status of Respondents:

The data collected from 200 artisans, 10 NGOs and 15 Govt. organizations have been compiled and analyzed.

### 6.1 Status of Artisans/SHGs/Entrepreneurs:

The responses from the 200 artisans with respect to skill training, awareness on the different schemes in their localities and status of technologies are presented below:

#### a) Skill Training:

Details on the skill training undergone / requirement by the respondents

**n = 200**

<i>Sl</i>	<i>Item</i>	<i>Particulars</i>	<i>n</i>	<i>%</i>
1	Details on skill training undergone by the respondents under SME category	Received skill training on the technology	146	73%
		Not received any training	54	27%
2	Details on the skill training providers on the technologies	From family members	30	15%
		From local trainers	111	55.5%
		No other sources	59	29.5%
3	Ability to provide training by the respondents	Agreed to act as a resource persons for the training programmes	183	91.5 %
		Not received any training	17	8.5 %
4	Trainers availability in the locality	Availability of trainers are to impart the training	102	51 %
		Non availability of trainers	98	49 %
5	Requirement of Skill training	Need of skill training on the technologies	165	82.5 %
		Non-requirement of the training	35	17.5 %

The above table reveals that the majority of the respondents are having knowledge on their enterprises on account of the skill training received on the technologies and sufficient number of trainers also available to impart the training on the concerned technologies. However, it is reported that to enhance their efficiency in their production and the training skills there is a requirement of organizing skill up-gradation trainings along with latest technologies.

**b) Awareness on different schemes:**

Details on the awareness of different schemes operational in the study area:

<i>Sl</i>	<i>Item</i>	<i>Particulars</i>	<i>n</i>	<i>%</i>
1	Awareness on different schemes of Government	Aware about the schemes	44	22 %
		Not aware of any schemes	156	78 %
2	Awareness on different schemes/support of private organization	Aware about the schemes	06	03 %
		Not aware of any schemes	194	97 %
3	Awareness on different schemes/support of NGOs	Aware about the schemes	52	26 %
		Not aware of any schemes	148	74 %

It is observed from the above table that the respondents are not having sufficient awareness on different schemes of the Government, Private organizations and NGOs. Among the three organizations, the NGOs are providing comparatively more support in implementation of the schemes to the villagers followed by the Government. The role of private organizations in providing the support to the villagers reported to be very meager. Therefore, it is essential to organize more awareness programmes on the different schemes of the Government to the villagers which will enhance the technology adoption and livelihood activities.

**c) Details of Technologies:**

Details on status of technologies:

<i>Sl</i>	<i>Item</i>	<i>Particulars</i>	<i>n</i>	<i>%</i>
1	Availability of raw materials to run the enterprise	Available	109	54.5 %
		Non availability of raw materials	91	45.5 %
2	Status of technologies	Commercial	157	78.5 %
		Trial basis	43	21.5 %
3	Technology Acceptance	High	168	84 %
		Medium	16	08 %
		Low	16	08 %

4	Location specific	Technologies for particular location	57	28.5 %
	Technologies	Technologies in general	143	71.5 %

5	Gender based technologies	Women friendly technologies	41	20.5 %
		Technologies in general	159	79.5 %

6	Availability of IEC materials for the technologies	Multimedia / printed brochures about the technology are available	12	06 %
		Any forms of materials are not available	188	94 %

It is observed from the above table that though most of the technologies are in commercial nature and high acceptability among the respondents, they felt that efforts to be made to increase the availability of raw materials to run the enterprise unit in the particular locality. Further, it is reported by more than 70% of the respondents that the technologies are general in nature irrespective of gender and location specific. Therefore, it is necessary to identify more women friendly technologies to create self employment opportunities among the rural women in the villages. In addition to that it is necessary to come out with more technical information about the technologies using the multimedia and print media.

## 6.2 Status of Government organizations and NGOs:

Under the various schemes of the Government and NGOs the different technologies in the sectors such as small and medium enterprises, renewable energy and water supply & sanitation have been transferred by them. The details of the technologies, the TOT methods used by the 10 NGOs and 15 Govt. organizations have been compiled and analyzed. The responses are presented below:

### a) Details of Technologies:

Details on status of technologies:

**n = 25**

<i>Sl</i>	<i>Item</i>	<i>Particulars</i>	<i>n</i>	<i>%</i>
1	Availability of raw materials to run the enterprise	Available	10	40 %
		Non availability of raw materials	15	60 %

2	Status of technologies	Commercial	17	68 %
		Trial basis	08	32 %

3	Technology Acceptance	High	20	80 %
		Medium	04	16 %
		Low	01	04 %

4	Location specific Technologies	Technologies for particular location	10	40 %
		Technologies in general	15	60 %
5	Gender based technologies	Women friendly technologies	04	16 %
		Technologies in general	21	84 %
6	Availability of IEC materials for the technologies	Multimedia / printed brochures about the technology are available	06	24 %
		Any forms of materials are not available	19	76 %

It is observed from the above table that the responses received from the artisans (refer table – 4) and the Govt. organizations & NGOs are almost similar. The data reveals that efforts are to be made to increase the availability of raw materials to run the enterprise unit in the particular locality by these organizations.

**b) Details of Transfer of Technology methods and usefulness:**

Table 6: Details on TOT methods and usefulness:

**n = 25**

<i>Sl</i>	<i>Item</i>	<i>Particulars</i>	<i>n</i>
1	Transfer of technology methods used by GOs & NGOs	Training	20
		Workshop	09
		Mass media	--
		Demonstration	08

**n = 10**

2	Usefulness of the technology Reported by the NGOs only.	Improving the quality of life	07
		Increasing the efficiency of product	01
		Generating more income	06

The above table reveals that the organizations are adopted various combinations of TOT methods for transfer of a particular technology. However, the use of mass media in technology transfer has not been reported by both organizations. As the mass media is a powerful technology transfer tool, optimum utilization may be initiated by the organizations to have a wider dissemination of technologies. The respondents of the NGOs indicated that the technologies have substantially enhanced the quality of life and income generation. The analysis of data indicates that the NGOs may take more efforts to increase the efficiency of the products by the way arranging the raw materials and more technical inputs.

## 7. ABSTRACT DATA OF FIVE PROVINCES

SI	Particulars	Category of Enterprise			Total
		SME	Renewable Energy	Water & Sanitation	
1	Artisans/SHGs/Entrepreneurs	170	16	14	200
2	NGOs	05	01	04	10
3	GOs	06	03	06	15
	Total	181	20	24	225

### Responses of respondents FIVE provinces with regard to SMEs, Renewable energy and Water & Sanitation

SI	Particulars	Artisans (n = 200)		NGOs (n = 10)		GOs (n = 15)	
		Yes	No.	Yes	No	Yes	No
1	Skill training undergone	146	54	NA	NA	NA	NA
2	Training provided by		--	NA	NA	NA	NA
	a) family members	30					
	b) Local trainer	111	-	NA	NA	NA	NA
	c) None	59	--	NA	NA	NA	NA
3	Ability to provide trg.	183	17	NA	NA	NA	NA
4	No. of trainers available	102	98	NA	NA	NA	NA
5	Need of skill training	165	35	NA	NA	NA	NA
6	Awareness on Govt. schemes	44	156	NA	NA	NA	NA
7	Awareness on pvt. Org.	06	194	NA	NA	NA	NA
8	Awareness on NGOs	52	148	NA	NA	NA	NA
9	Availability of Raw materials	109	91	05	05	05	10
10	Status of technology		--		--	--	--
	a) Commercial	157	--	05	--	12	--
	b) Trial basis	43	--	05	--	03	--
11	Acceptability of technology						
	a) High	168	--	07	--	13	--
	b) Medium	16	--	02	--	02	--
	c) Low	16	--	01	--	--	--
12	Location specific technology	57	143	04	06	06	09
13	Gender based technology	41	159	01	09	03	12
14	Availability of IEC materials for TOT	12	188	03	07	03	12
15	TOT methods used	NA	NA				
	a) Training	--	--	10	--	10	--
	b) Workshop	--	--	03	--	06	--
	c) Mass media	--	--	--	--	--	--
	d) Demonstration	--	--	04	--	04	--
16	Usefulness of the tech.	NA	NA			NA	NA
	a) In improving the quality of life	--	--	07	--	--	--
	b) In increasing efficiency of product	--	--	01	--	--	--
	c) In generating more income	--	--	06	--	--	--

## 8. COMPREHENSIVE LIST OF TECHNOLOGIES PRIORITIZED

The province wise prioritized technologies have been shortlisted by eliminating the repeated technologies to prepare a comprehensive list of technologies for skill up-gradation and technology transfer by the RTP, AIRD. The list is as given below:

Sl.	Name of the Technology	Sl.	Name of the Technology
1	Tailoring	23	Embroidery
2	Oil Extraction	24	Carpet weaving
3	Solar Power	25	Water tanker making
4	Fertilizers	26	PCC blocks making
5	M H P	27	Raisin Making
6	Rug Weaving	28	Bitumen making unit
7	Water Mill	29	Submersible Pump
8	Carpentry	30	Fruit and vegetable processing
9	Steel works	31	Hand Pump installation
10	Chapel making	32	Local latrines
11	Furniture	33	Local oven for bread cooking
12	Food Processing	34	Bakery (Kulchy)
13	Plaster production	35	Pomegranate Jam
14	Rubber shoes making	36	Shoe Making
15	Rubber bucket making	37	Solar panel
16	Solar cooker	38	Grapes Jam
17	Spice making	39	Sweets (Nuqal)
18	Jewellery	40	Vinegar Making (Sirka)
19	Plough and blade	41	Apricot Drying
20	Pottery	42	Pipe Scheme
21	Smith	43	Tomato Paste
22	Soap making unit	44	Tin smith

### 9. RESPONDENTS FEED BACK ON THE PRIORITIZED TECHNOLOGIES

The following are the feedback of the respondents with respect to the prioritized technologies on SME, Renewable Energy and Water supply & Sanitation.

<i>Sl.</i>	<i>Technology</i>	<i>Feed back of the respondents</i>
1	Apricot drying	Need advanced Processing technology to increase the income
2	Bakery	Nice work with good demand in market
3	Bitumen	It is a useful technology
4	Cake, Basket making Machine	As this product are having more demand for functions, need modern techniques to increase the production
5	Carpentry Machine	Requires new Machineries namely Spindale, Saw Machine etc
6	Carpet Weaving	Govt should give Machinery and wool to weavers along with Market facilities
7	Chapel making Machine	Importing of chapel from Pak restricted and the govt. should encourage the local manufacturers
8	Diesel generator energy	It's very useful but economically not feasible which may be replaced with renewable energy
9	Embroidery	Presently, embroidery is being done by hand, which consumes more time, hence advanced machinery may be arranged along proper continuous power supply
10	Fertilizers Production	As fertilizers application increases the crop productivity, the technologies related to fertilisers may be encouraged.
11	Food Processing( Tomato, Acid, jam )	Advanced machineries which consumes low electricity may be given for Packing, bottling etc.
12	Fruit and vegetable process	Need processing technology on apricot, mulberry and peach
13	Furniture	New machinery tools should be given and training may be given
14	Goldsmith	This is a traditional technology required encouragement
15	Grapes Jam	Due to non-availability of new technology on packaging, unable to expand their market
16	Hand Pump	This is a useful technology for getting the clean water
17	Latrines	This technology should be constructed in every Village to have a good health and hygiene
18	Lobber bucket	This technology is very useful for all people of village
19	Metal Works	Good work but machinery should be improved, very old and weak machinery in use
20	MHP	It is a useful technology in producing electricity to meet the needs of villagers

21	Oil extraction (Sun Flower & Mustard)	Satisfactory production but quality can be improved by modifying machinery
22	PCC slabs	Hope government help people to develop new technologies for them
23	Pipe Scheme	It is useful technology to get safe drinking water. This may be extended to all houses in the villages
24	Plaster of Paris as Building Decoration	Very Fine work have good demand in market, needs government support to develop new technologies for them
25	Plough & blade	Hope government help people to develop new technologies for them
26	Pomegranate Jam	Good demand in market and can be improved if government help these people to get new technologies
27	Pottery	The technologies should be encouraged by arranging more trainers and vibrator to mix the mud
28	Raisin Making	Easy process and good demand in market. The raisin cleaning machine may be made locally
29	Rug Weaving	The existing wooden frame may be replaced with new and modern frame to weavers to produce more Rugs. As the rug weaving is a handwork, new machines may be given along with hands on training to train more people
30	Shoe Making	Till now they are making shoe by hand but it should be replaced with machinery and suitable place is needed for its process
31	Smith	It's very important for mining
32	Soap Making	New technology is required
33	Solar	It helps to produce electricity and facilitated many villages. However, due to poor quality batteries the storage of power is reducing.
34	Solar pan	This technology is mostly developed by females
35	Submersible Water Pump	It provides safe drinking water
36	Sweet making ( Chocolate )	They need new technologies to produce sweets in three eastern Provinces
37	Tailoring	Existing old Machineries should be replaced with Awarlok, Zikzak machine along with materials to train others
38	Tomato paste	Home scale production may be encouraged along with latest technologies where the tomato production takes place.
39	Vinegar Production	Low quality grapes are being used for vinegar production which decreases losses
40	Water Mill	Traditional water mill, only used for flouring but with some modification it can also be used for electricity production. New technology to increase the water pressure is required to enhance the efficiency. New water mills are to be setup where more wheat is available

## 10. CONCLUSIONS & RECOMMENDATIONS:

Based on the study, the following are the feedback on the listed technologies and suggestions for initiating action by the RTP, AIRD.

1. The respondents revealed that the Govt. schemes such as WATSAN, MAIL, NSP, NABDP and RRD are operational in their provinces and provided necessary infrastructure mostly on MHP, Solar, pipe scheme, water reservoir, potato storage, sanitation etc. The support of MRRD and MOWA were appreciated by the respondents. However, the respondents felt that these schemes may provide latest technologies and machineries for enhancement of performance efficiency and thereby production capacity.
2. The establishment of Small and medium enterprises such as tailoring, embroidery, carpet weaving, hand pump, MHP, pottery etc. were provided by the following NGOs.

ACTIONAID	BRAC	JICA	MERCY CORPS
DAI	PRT	HADAF	PIN
IRC	IRD	SAHAHADA	DACAAR
GTZ	AVIPA	AKDN	NPO
WFP	UNHCR	BENYATSULH	CHA
ASMED	UNICEF	NCA	ARA
LGCD	UNHABITAT	ICRC	BCC
BELGIC	UNFAO	MADERA	

As a part of establishment of the enterprise the above NGOs also provided hands-on-training on various technologies such as production of raisin, bitumen, plaster of Paris and solar appliances. Besides this the organizations also empowered the villagers in production of artisan based technologies such as carpentry, pottery, smith, jewelry, chapel making etc.

3. It is also reported that only few private organizations namely Bee-keepers association, NSDP, Sahil ltd. Kobaba and brothers company etc. are involved in technology transfer and creation of small scale enterprises in the villages. As the private organizations initiatives are creating more employment opportunities with the latest technologies, the respondents expressed that more number of private organizations can be involved to initiate the activities in the villages.

4. The majority of the respondents expressed that most of the technologies on carpentry, food processing, tailoring, carpet weaving, fruit processing etc. are used with the traditional methods/old machineries. Though, these technologies are having good markets they are unable to enhance their production. Hence, it is suggested that the RTP should initiate the following activities:
  - a. Collect information on latest machineries on the related technologies
  - b. Create awareness among the beneficiaries about the machineries
  - c. Arrange to place / install the machineries in the RTP to showcase the process
  - d. Organize training programmes on the different process methods using the machineries placed in the RTP
  - e. Facilitate the villagers/entrepreneurs in getting the necessary machineries from the suppliers / fabricators / manufacturers.
  - f. Organize Train the Trainers programme to create large number of resource persons in the villages.
5. It is observed that most of the technologies are not gender based. As the gender based technologies will provide employment for the rural women and empower them, it is suggested to identify and encourage more women friendly technologies in the villages. This may enhance their livelihood and economic status of the villages which in turn create the impact on the overall economy of the country.
6. The technologies on MHP, water mill, solar, pipe scheme, hand pump etc. has benefited the villagers for production of electricity, availability of safe drinking water and operation of flour making machines. The efficiency of these technologies can be enhanced by providing skill up-gradation and innovative methods such as use of LEDs in the lighting, using of branded storage batteries, the machineries required to increase the water pressure for water mills etc.
7. The report indicated that the awareness on the Government schemes and schemes of private organizations among the villagers is found to be very low. Therefore it is suggested to have more awareness programmes through road shows, electronic media, print media etc. In all the programmes it is suggested to implement participatory approach for achieving the desired outcome.

## 11. ACTION PLAN FOR RTP AT AIR D, KABUL

The activities initiated in establishment of RTP since Dec 2009, such as consultative workshop, institutional attachment, workshop on document of technologies etc. have given a direction to Rural Technology Park to carry out the following plan of action.

- ✓ Immediate requirement of land allotment of at least 20 ac for construction of administrative building, training hall, dormitory accommodation and construction of technology stalls for training cum demonstration. **These buildings can be completed in a phased manner within two years.**
- ✓ The data collection report indicated that about fifty technologies have been documented from five provinces. Therefore, the RTP team may compile the details of technologies to fill the gaps / missing information for publishing of first volume of the Directory of Rural technologies. **This assignment may be completed by Sept 2010.**
- ✓ The present study report has prioritized 46 technologies. Most of these technologies are functional using the traditional methods or by using the locally available resources. Therefore, the RTP team should take appropriate initiatives to blend the existing traditional technologies with modern technologies. The team may organize hands on training on usage of latest machineries to increase their production and enhance their performance efficiency.
- ✓ As the infrastructure for RTP may take some time, the AIRD may provide temporary building to showcase the technologies and to organize few training programmes to create awareness on the importance of RTP and its technology transfer programme in Afghanistan. **This facility may be arranged preferably before end of Sept 2010.**
- ✓ In anticipation of earmarking of temporary infrastructure by the AIRD, the RTP may prepare a training calendar to provide hands on training at RTP (one training per month) initially on the listed technologies for a period of one year. In addition to this one on-site training programme at the villages is also to be organized (one training per month) on the listed technologies for a period of one year. **This training calendar may be prepared before the end of October 2010.**
- ✓ During the institutional attachment of RTP team at NIRD, Hyderabad (India) the team has visited different technological institutions and identified the technologies which are suitable to Afghanistan. Now, the team should enlist such technologies and action to be

- ✓ initiated to import the same from India for which the necessary support may be obtained from NIRD, Hyderabad (India).
- ✓ As per the MoU between AIRD and NIRD the budget allocation for identifying appropriate technologies in India and facilitating its transfer of minimum 20 technologies is USD \$ 4000. This budget is earmarked only as service fee to NIRD. However the actual cost of technology and its transfer to be worked out separately by AIRD to meet the expenses.
- ✓ The MoU also indicated that the design layout and architectural plan should be completed by May 2010. As the finalization of site for RTP has not been completed by the AIRD, the efforts are to be made **to finalize the site at the earliest possible**. Further, the MoU between AIRD and MoRD.
- ✓ The RTP may plan to organize one Rural Crafts Exhibition at Kabul by inviting the artisans/ SHGs/entrepreneurs/NGOs/GOs to display and demonstrate the technologies to the public. This exhibition may be organized for a minimum of five days. The experience gained by the RTP team at NIRD, Hyderabad (India) with regard to Rural Crafts Mela during Feb 2010 may be utilized for organizing the programme at Kabul.
- ✓ To identify more technologies and interested entrepreneurs in transferring the technologies to the villagers, an Expression of Interest may be invited through press media indicating the concept of RTP. This process will facilitate the RTP to shortlist the technologies which are to be placed in the RTP premises in dynamic mode. The RTP, AIRD may prepare a budget requirement for providing logistic support like providing of basic infrastructure, few machineries etc. to the shortlisted entrepreneurs. These entrepreneurs will act as partners of RTP to fulfill the RTP objectives.
- ✓ The RTP may conduct action research in the villages for which it is suggested to identify two model villages. As this is the initial activity of RTP it is suggested to have collaboration with Afghanistan Rural Enterprise Development Programme (AREDP), MRRD to identify the villages. The RTP may also explore the possibility to utilize the fund availability of AREDP for the programme. If required an agreement may be executed between RTP and AREDP for initiating the collaborative activities. **This activity may be initiated immediately.**

- ✓ In order that the top management in MRRD fully comprehends and appreciates the concept and operationalisation of RTP, a study visit of senior level decision makers may be arranged to India to see NIRD and other RTP initiatives.

**12. ABSTRACT OF PROPOSED ACTIVITIES WITH TARGET**

<b>Sl.</b>	<b>Activity</b>	<b>Target period</b>
1	Identification of model villages for action research	August 2010
2	Publication of Directory of Rural Technologies	September 2010
3	Initiating activities in the model villages	September 2010
4	RTP site finalization	September 2010
5	Allotment of temporary building for show casing of technologies & training	September 2010
6	Preparation of design layout and architecture plan	October 2010
7	Preparation of Training calendar	October 2010
8	Organize training programmes as per the trg. calendar	Nov. 10 onwards
9	Importing of technologies from India	December 2010
10	Organizing of Rural Crafts Exhibition	Preferably before Mar 2011

**QUESTIONNAIRE**

**Rural Technology Park**  
**Afghanistan Institute of Rural Development**  
**Ministry of Rehabilitation & Rural Development**

.....

**Schedule 1**

**Schedule for the Documentation of Rural Technologies**

Name of the Interviewer: .....

Date of interview: .....

**Part I: General Information**

1. Name of the interviewee: .....
2. Address & Contact No: .....
3. Name of the Province: .....
4. Name of the District: .....
5. Name of the Village: .....
6. Salient features of the district:  
.....  
.....  
.....  
.....

## Part II: Non-Farm Based Technologies

### (From Artisans, SHG Members, and Entrepreneurs)

1. Name of the respondent: .....
2. Occupation:
  - a) Farmer ( )
  - b) Beneficiary ( )
  - c) Social Worker ( )
  - d) Other: .....
3. Contact number: .....
4. Category of the enterprise: **(Please ✓ mark)**
  - (a) Water supply & Sanitation ( )
  - (b) Renewable Energy ( )
  - (c) Small & Medium Enterprise ( )
5. Name of the Technology: .....
6. Have you under gone any skill training on the mentioned technology? **(Yes / No)**
7. Who has given training for the technology?  
.....
8. Can you give training for the above mentioned technology to others? **(Yes / No)**
9. Who are the other trainers in the locality involved in technology transfer?
 

Name of the person	Name of Technology
(a) .....	.....
(b) .....	.....
10. Whether you need any training in using the technology? **( Yes / No)**
11. List out the government schemes operational in your province for promotion of small scale industries?
  - (a) .....
  - (b) .....
12. List out the name of the private organizations, NGOs working in the provinces for promotion of the technology?
  - (a) .....
  - (b) .....
13. Observation of interviewer about the technology.  
.....  
.....

## Part C: Private Organizations / NGOs

1. Name of the organization: .....
2. Address: .....
3. Contact No: .....
4. Category of the enterprise: **(Please ✓ mark)**
  - (a) Water supply & Sanitation ( )
  - (b) Renewable Energy ( )
  - (c) Small & Medium Enterprise ( )
5. Name of the technology (s) promoted by the organization:
  - (a) .....
  - (b) .....
6. Name the provinces / districts covered by your organization on the technology:
 

.....

.....
7. Reasons for the establishment of the technology by your organization:
 

.....

.....
8. What are the methods for technologies transfers adopted by your organization?  
**(Please ✓ mark)**
  - (a) Training ( )
  - (b) Workshop ( )
  - (c) Mass Media ( )
  - (d) Demonstration ( )
  - (e) Other .....
9. Opinion on the sustainability of the technology:
 

.....

.....
10. How the technology has benefited the people? **(Please ✓ mark)**
  - (a) In improving the quality of life ( )
  - (b) In increasing efficiency of product ( )
  - (c) In generating more income ( )
  - (d) Others .....

## Part D: Government Organization

1. Name of the Govt. Officer: .....
2. Designation: .....
3. Name of the Department: .....
4. Name of the Ministry: .....
5. Category of enterprise: **(Please v mark)**
  - (a) Water supply & Sanitation ( )
  - (b) Renewable Energy ( )
  - (c) Small & Medium Enterprise ( )
6. Name of the scheme: .....
7. Name of the technology: .....
8. Name of the districts in which the particular technology is transferred:
  - (a) .....
  - (b) .....
  - (c) .....
9. Methods employed for technology transfer**(Please v mark)**
  - a) Training ( )
  - b) Workshop ( )
  - c) Mass Media ( )
  - d) Demonstration ( )
10. Other .....
11. Feed back on the technology: (Based on response for local people)
 

.....

.....
12. Opinion of the interviewer:
 

.....

.....

## Schedule 2: RTP: Technology Directory

Sector: .....

S. No	Sub Heading of Information	Details
1	Name of the Product/Process.	
2	Brief description and salient features of technology/process.	
3	Raw materials/machinery and its local availability.	
4	Status of technology (available in market/Trial Stage).	
5	Technology demonstration-cum-training facilities.	
6	Acceptability of technology.	
7	Is the technology location specific? (If, so details).	
8	Gender bias in the technology utilization (Yes/No).	
9	Is any IEC material including CDs available on the technology?	
10	Name and address of the technology developer.	
11	Name address of the technology transfer institution/individual.	
12	Willingness to put up a demonstration in the Rural Technology Park.	

**LIST OF SOCIAL WORKERS ASSOCIATED IN DATA COLLECTION**

<b>S. No</b>	<b>Name</b>	<b>Father Name</b>	<b>Position</b>	<b>Team Location</b>
1	<b>Muhammad Daud</b>	<b>Niaz Muhammad</b>	<b>Team Leader</b>	<b>Balkh</b>
2	Fida Mohammad	Abdul Mohd	Team Member	Balkh
3	Tooryali Shahzad	Sher Agha	Team Member	Balkh
4	Shukriya Safdari	Safdar Ali	Team Member	Balkh
5	Asad Ullah	Mohd Ayub	Team Member	Balkh
6	Ahmed Jawad	Abdul Ahad	Team Member	Balkh
7	Kamal Uddin	Mula Chari	Team Member	Balkh
8	<b>Najeeb Ullah</b>	<b>Habib Ullah</b>	<b>Team Leader</b>	<b>Bamyan</b>
9	Mohammad Amir	Mohd Naim	Team Member	Bamyan
10	Syed Abdul Hameed	Amir Hussain	Team Member	Bamyan
11	Mohammad Nabi	Ali Shifa	Team Member	Bamyan
12	Zarif	Mirza Hussain	Team Member	Bamyan
13	Qurban Ali	Khadim Ali	Team Member	Bamyan
14	Asad Ullah	Moul Uddin	Team Member	Bamyan
15	<b>Sayed Fakhruddin</b>	<b>Sayed Hassan</b>	<b>Team Leader</b>	<b>Ghazni</b>
16	Ghulam Mohammad	Ghulam Sakhi	Team Member	Ghazni
17	Sayed Rahim	Sayed Rahim	Team Member	Ghazni
18	Ateeq Ullah	Baran Shah	Team Member	Ghazni
19	Mohammad Ajmal	Mohd Akbar	Team Member	Ghazni
20	Beryali	Ayesa Khan	Team Member	Ghazni
21	Khairuddin	Ahsam Uddin	Team Member	Ghazni
22	<b>Hidayat Ullah Sapi</b>	<b>Abdullah</b>	<b>Team Leader</b>	<b>Kandahar</b>
23	Ahmed Ullah	Mohd Sadiq	Team Member	Kandahar
24	Mohammad Naseem	Gul Mohd	Team Member	Kandahar
25	Ghulam Mahrrof	Juma Mohd	Team Member	Kandahar
26	Noor Mohammad	Gul Mohd	Team Member	Kandahar
27	Aziz Ullah	Mohd Anwer	Team Member	Kandahar
28	Abdul Qayom	Abdul Kareem	Team Member	Kandahar
29	<b>Sayed Nasrat Sadat</b>	<b>Sayed Abrar</b>	<b>Team Leader</b>	<b>Nangarhar</b>
30	Safi Ullah	Khan Mohd	Team Member	Nangarhar
31	Mohammad Naeem	Amir Ullah	Team Member	Nangarhar
32	Ghulam Haider	Ghulam Nabi	Team Member	Nangarhar
33	Mohammad Jamil	Abdul rashid	Team Member	Nangarhar
34	Nasir Jan	Sultan Jan	Team Member	Nangarhar
35	Pamir	Mohd Kahir	Team Member	Nangarhar