**Micro-Hydro Plants Survey Khyber Pakhtunkhwa**

|  |  |  |  |
| --- | --- | --- | --- |
| Name: |  | Village: |  |
| Gender |  | Tehsil/District |  |
| Age: |  | Family Members: |  |
| Qualification: |  | Family Income: |  |

*Fill each section according to the given instructions. Mark the check box or fill in the blank of the following questions. Avoid filling incorrect details.*

###### Section A: Non MHP Users

1. Source of Electricity  
     
   WAPDA 🞏   
   Solar Cells 🞏  
   Generator 🞏  
   UPS 🞏

Others \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. For what purpose do you use electricity in your home?  
     
   Home Lighting 🞏  
   Home Appliances 🞏  
   Heating 🞏
2. Cooling 🞏
3. Business 🞏

Others \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What electric appliances do you have in your household?

TV 🞏  
Fridge 🞏  
Washing Machine 🞏

1. Blenders 🞏
2. Computers 🞏
3. Others \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. For how many hours’ electricity is available??

SUMMER:

< 5 Hours 🞏  
5-8 Hours 🞏  
9-13 Hours 🞏

1. >13 Hours 🞏

WINTER:

< 5 Hours 🞏  
5-8 Hours 🞏  
9-13 Hours 🞏

>13 Hours 🞏

1. For how much time do you use light in 24 hours?

SUMMER:

< 5 Hours 🞏  
5-8 Hours 🞏  
9-13 Hours 🞏

1. >13 Hours 🞏

WINTER:

< 5 Hours 🞏  
5-8 Hours 🞏  
9-13 Hours 🞏

>13 Hours 🞏

1. What is the average monthly electricity bill that you are paying for electricity?

Rs. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. WAPDA electricity Charges

Total Bill \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Installation Prices \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Connection Charges \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Do you have any economic activity in your household? If Yes, What type of activity?

Small Shop 🞏

Tailoring 🞏  
Grain Grinding 🞏  
Embroidery 🞏

Others \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Does load shedding it affect your work and education?

Work 🞏  
Education 🞏

1. WPDA load shedding is scheduled or unscheduled?

Scheduled 🞏  
Unscheduled 🞏

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| --- | --- | --- | --- |
| Name: |  | Village: |  |
| Gender |  | Tehsil/District |  |
| Age: |  | Family Members: |  |
| Qualification: |  | Family Income: |  |

**Section B: Economic Activities**

1. Source of Electricity  
     
   WAPDA 🞏   
   Solar Cells 🞏

MHP 🞏  
Generator 🞏  
UPS 🞏

Others \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Do you have any economic activity in your household? If Yes, What type of activity?

General Store 🞏

Small Shop 🞏

Tailoring 🞏  
Bakery 🞏  
Computer Café 🞏

Electronics Shop 🞏

Others \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Does your work depend on availability of Electricity?

Yes 🞏

No 🞏

1. What is your total Income per month from the economic activity  
     
   Rs. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Total Electric Power Units consumed per month

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_kWh

1. What is your total Electricity Bill?

Rs. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Does electricity fluctuation effect your economic activity.  
   Yes 🞏  
   No 🞏

**Micro-Hydro Plants Survey Khyber Pakhtunkhwa**

|  |  |  |  |
| --- | --- | --- | --- |
| Name: |  | Village: |  |
| Gender |  | Tehsil/District |  |
| Qualification: |  | Family Members: |  |
| Age: |  | Female Member: |  |
| Male Members: |  | Family Income: |  |

**Section C: For MHP Users**

1. For what purpose do you use electricity in your home?  
     
   Home Lighting 🞏  
   Home Appliances 🞏  
   Heating 🞏
2. Cooling 🞏
3. Business 🞏

Others \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What electric appliances do you have in your household?

TV 🞏  
Fridge 🞏  
Washing Machine 🞏

1. Blenders 🞏
2. Computers 🞏
3. Others \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. For how many hours’ electricity is available??

SUMMER:

< 5 Hours 🞏  
5-8 Hours 🞏  
9-13 Hours 🞏

1. >13 Hours 🞏

WINTER:

< 5 Hours 🞏  
5-8 Hours 🞏  
9-13 Hours 🞏

>13 Hours 🞏

Specify \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. For how much time do you use light in 24 hours?

SUMMER:

< 5 Hours 🞏  
5-8 Hours 🞏  
9-13 Hours 🞏

1. >13 Hours 🞏

WINTER:

< 5 Hours 🞏  
5-8 Hours 🞏  
9-13 Hours 🞏

>13 Hours 🞏

Specify \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What is the average monthly electricity bill that you are paying for electricity?

Rs. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. MHP electricity Charges

Per Unit Charge \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Installation Prices \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Connection Charges \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Taxes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Do you have any economic activity in your household? If Yes, What type of activity?

Small Shop 🞏

Tailoring 🞏  
Grain Grinding 🞏  
Embroidery 🞏

Others \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Does load shedding it affect your work and education?

Work 🞏  
Education 🞏

1. MHP load shedding is scheduled or unscheduled?

Scheduled 🞏  
Unscheduled 🞏

**Micro-Hydro Plants Survey Khyber Pakhtunkhwa**

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| --- | --- | --- | --- |
| Name: |  | Village: |  |
| Gender |  | Tehsil/District |  |
| Age: |  | Family Members: |  |
| Qualification: |  | Family Income: |  |

**This section is to be filled by only the operator, engineer or focal person of the MHP.**

**Section D: MHP Operator / Maintainer**

1. Started operation in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Ownership of MHP:

Government 🞏  
Community 🞏  
Private (NGO) 🞏

1. Name of the organization who installed it

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Number of power houses installed per location\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Number of turbines per power house \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Turbine Type

Turgo 🞏  
Pelton 🞏  
Multi-jet Pelton 🞏  
Crossflow 🞏

Francis 🞏

Kaplan 🞏

Fixed Pitch Propeller 🞏

1. Electricity generation capacity of the power plant in (kW)  
      
   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_kW
2. Turbine Manufacturer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Turbine Efficiency \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Number of households connected to the plant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Number of households not connected to the plant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Operating Hours of MHP:

Overloaded: From\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ To \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Full Capacity: From\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ To \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Minimum Capacity: From\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_To\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Medium Capacity: From\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_To\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Operating Load:

Full Capacity: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_kWh

Minimum Capacity: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_kWh

Medium Capacity: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_kWh

1. Electricity bill collected from the households per month in

Rs \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Number of economic activities in community \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Electricity bill collected from the shops/businesses per month in

Rs \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Frequency of Load Shedding/Overloading of MHP\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Total bill collected in RS
   1. Per Month\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Per Annum\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Issues in MHP operation  
     
   Overloading 🞏  
   Pipeline blockage 🞏  
   Turbine Failure 🞏

Water Flow Rate 🞏  
Others \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Water Flow Rate:

Summer:

* 1. March \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  2. April \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  3. May \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  4. June\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  5. July \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  6. August \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Winter:

* 1. September \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  2. October \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  3. November \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  4. December\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  5. January \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  6. February \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What stopped this MHP from operating:

Landslide 🞏  
Flood 🞏  
Earthquake 🞏

1. Storm 🞏
2. Depleted Funds 🞏
3. Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Number of floods in the area till MHP installation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Number of Earthquakes in the area till MHP installation\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Number of Landslide in the area till MHP installation\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Precautions against catastrophic event

Some 🞏  
Many 🞏  
None 🞏

1. Operation & Maintenance performed by  
   Locals 🞏  
   Government Officials 🞏  
   Private Contractors 🞏  
   Others \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Information of Operators
   1. Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Age\_\_\_\_\_ Qualification:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Age\_\_\_\_\_ Qualification:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Age\_\_\_\_\_ Qualification:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Age\_\_\_\_ Qualification:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Who repair the plant in case of failure?

Locals 🞏  
Government Officials 🞏  
Private Contractors 🞏