

Operational Guideline
on
ORDINARY/MANUAL RAIN GAUGE
(for Rainfall measurement and Data Sharing)
under
Atal Bhujal Yojana

1. Ordinary/ Manual Rain Gauge:

Rain gauge is an equipment used by meteorologists and hydrologists to gather and measure the amount of liquid precipitation (Rainfall) over a predefined area, over a period of time. There are many types of rain gauges which includes manual / ordinary type and also sensor based Automatic weather stations. Most rain gauges use millimeters as the unit of measurement, and sometimes the measurement results are in inches or centimeters as the unit. The reading of the rain gauge can be read manually. The ordinary rain gauge consists of a funnel shaped metal or hard plastic container, the funnel ends up in a measuring tube in which rain water is collected and can be measured.

Picture of an ordinary rain gauge (with fencing for protection purpose)



2. Rainfall Measurement:

Rain is only source of fresh water and major component of the water cycle. In addition, Rainfall is the major source of water for irrigation and hence quantitative assessment of rainfall helps in estimation of water availability and water budgeting as well as agricultural planning. Rainfall measurement is an organized activity to record rainfall behavior, at regular intervals.

3. Purpose of rainfall monitoring at Gram Panchayat level:

Accurate and precise rainfall data is one of the very important parameters in preparation of Water Security Plans in Atal Bhujal Yojana. The rainfall data helps in the estimation of Water

Availability, which gives an account of the status of Water Resources in each Gram Panchayat. At the same time, the rainfall data helps in arriving at runoff and planning supply side interventions. Maintaining a regular data /record of rainfall will also help in the year-on-year updating of Water Security Plans.

4. Parameter Monitored:

Under Atal Bhujal Yojana, **Rain Gauge Stations** are being installed at every Gram Panchayat to monitor the “**Depth of water in millimeters**” which falls on an impermeable levelled surface on daily basis. The rain gauge basically collects water falling on it and records the change in rainfall depth over time, which is usually expressed in millimeter (mm). (Ref: *Guideline for Guidelines for recording Rainfall data using Ordinary/Manual Rain Gauge*)

5. Data Collection:

The measurement of Rainfall is to be done by the District Implementation Partners (DIPs) / Gram Panchayat level functionaries/ Field Level Workers (FLWs), through Rain Gauge installed in the respective Gram Panchayat on daily basis.

The methodology for rainfall measurement and record keeping is given as below:

- The readings from the rain gauge is to be taken between 8-9 am on a daily basis during the rainy season and during non-rainy season in the Gram Panchayat.
- Ideally, a person from DIP or in the village a local person shall be identified for taking the measurements on regular basis.
- A separate register to be maintained by the person, for recording the measurements as per the template attached. (Annexure-I)
- A facility to update the real time information has been created in Atal Jal mobile application.

6. Data Sharing with NPMU:

- The rainfall data in the prescribed format (*Annexure-I*) should be maintained by the DIPs/FLWs on a daily basis. The data shall be shared with DPMU on monthly basis by 1st of every month.
- The data shall be collated for all the Gram Panchayats in the district by DPMU. Any absurd values and anomalies shall be rectified/removed at the DPMU level. Thoroughly verified data must be shared with SPMU for further compilation and authentication.
- SPMU shall share the data with NPMU by the 5th of every month, through email at ddir1-ataljal@gov.in with a copy to atal-jal@gov.in
- A facility to update the real time information has been created in Atal Jal mobile application, and is under finalization. A manual will be shared separately.

Dissemination of data at the level of Gram Panchayat, through notice boards/ social media/ pamphlets/ wall paintings/ etc., to be emphasized and ensured by DPMU & SPMU.

Annexure-I

Template for measurement & record keeping of Rainfall Data (through Rain Gauge)

S. No	State	District	Block	GP	Village	Site name	Location Details	Latitude	Longitude	Type of Rain Gauge (Manual/ Telemetry)	Date of data collection	Time of data collection	Rainfall (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14

(Units: "mm"- in millimeters)

(Latitude & Longitude to be mentioned in Degree Decimal)

**Column no. 1 to 11 are static/one-time information. This shall be fixed for the Rain Gauge station installed in the Gram Panchayat.*

**Column No. 12 to 14 are dynamic information and must be updated on daily basis (preferably between 8-9 am).*

**The entire template can be copied and maintained in excel format for ease of compilation by DPMU/SPMU/NPMU.*