**Watershed India – Water point and household survey**

**Methodology for field survey**

The Watershed project in India is operational in 20 villages in the two Indian States of Odisha and Bihar.

In Odisha, the project covers 10 revenue villages (6,905 households) in 4 Gram Panchayats in Ganjam district.

In Bihar the project covers 10 revenue villages (11,937 households) in 5 Gram Panchayats in Samastipur district.

In 2017, water points and households in the operational areas of Watershed India were surveyed using Akvo Flow and Akvo Caddisfly, to gather information about the situation of WASH (including water quality) and IWRM in the area. A complete mapping and water quality tests of all public water points and sample survey of households were conducted.

**Data links** - Watershed Flow dashboard

**Consolidated Visualisation link -** <https://drive.google.com/drive/folders/0B5Me9a1tQcLFSkU3YldOTFFoVVk>

**Village wise data visualisation links:**

|  |
| --- |
| **Ganjam: Village-wise visualization of key WASH indicators**   * [**Tikiria Barhampur**](https://watershedsouthasia.akvolumen.org/s/H6bx-tNnPJA) * [**Kanamana**](https://watershedsouthasia.akvolumen.org/s/id_3sE81Ga4) * [**Arjyapalli**](https://watershedsouthasia.akvolumen.org/s/-mpYLD4aW90) * [**Agastinugaun**](https://watershedsouthasia.akvolumen.org/s/Rxfuem4GP-Y) * [**Matikhala**](https://watershedsouthasia.akvolumen.org/s/JByyxxqUZzs) * [**Puruna Chatrapur**](https://watershedsouthasia.akvolumen.org/s/ePDDg0qknak) |
| **Samastipur: Village-wise visualization of key WASH indicators**   * [**Lakhanipur Maheshpatti**](https://watershedsouthasia.akvolumen.org/s/JO0Ap8ZImyI) * [**Raipur**](https://watershedsouthasia.akvolumen.org/s/uFRA6jf4RPw) * [**Barbatta**](https://watershedsouthasia.akvolumen.org/s/HhpsKbnC1eY) * [**Bhagwanpur Kamla**](https://watershedsouthasia.akvolumen.org/s/GMteiUdw1AQ) * [**Ujiarpur**](https://watershedsouthasia.akvolumen.org/s/cTrBvoSY9iI) * [**Saidpur Jahid**](https://watershedsouthasia.akvolumen.org/s/0RQScoOboPs) |

The following describes the methodology used for the surveys.

**Water point survey:**

**Survey information** : Water point access, quantity, quality, reliability, WRM related indicators

**Survey population / size:** The survey covered **ALL PUBLIC Improved Water points.** These included public hand pumps / tube wells, public standposts / taps and (covered) dug wells i.e. all water points that have been installed by and are notionally the responsibility of the government. **ALL** such water points were covered, **regardless of whether they are functional or not.**

In the sample survey of households, if any household was found to collect water from a private improved water source (handpump / tubewell or tap / covered dug-well), this source was also surveyed, **in addition to** the public water points.

**Survey methodology:** Data from the secondary sources provided a rough estimate of existing water points that needed be surveyed. Each water point was listed and numbered in the following sequence to arrive at a 16 digit code.

* The codes up to the village level were matched with the **standard administrative codes assigned by the government of India**. This was done to make the data about the water points comparable / correspond with the existing government records.
* The **type** of water source was indicated using **‘H’** to represent Hand pumps or tube wells, **‘T’** to represent standposts or taps and **‘O’** for any other type of improved water point e.g. covered dug-wells.
* The **status** of the water source was indicated by **‘P’** – indicating a public improved water point and **‘H’ –** indicating a household improved water point.
* The last three digits of the water point code indicates the number assigned to it during the survey, by following a **sequence** from 001 to 999. This will ensure that the same number is not assigned to more than one water point.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
| **State** | **District** | **Block** | **GP** | **Village** | **Hamlet** | **Type** | **Status** | **Serial No.** |
| Govt. code | Govt. code | Govt. code | Govt. code | Govt. code | Assigned code | **H** – Handpump / Tube well | **P**- Public | Assigned code |
| \_ \_/ | \_ \_/ | \_ \_/ | \_ \_/ | \_ \_/ | \_ \_/ | **T** – Standpost / tap | **H** - Household | /\_ \_ \_ |
|  |  |  |  |  |  | **O** - Other |  |  |

The questionnaire used in the survey was designed in a manner that information in columns 1 to 8 showed up as cascade questions i.e. only the relevant ones appear during the survey. **The enumerator manually entered ONLY a 3 digit code for column 9.**

**Field methodology:** Considering the hamlet to be the lowest administrative unit of the survey, the entire survey team first went to the center of the hamlet to start the survey. Placing a bottle at the approximate center point of the village, it was spun in an anti clockwise direction. The survey in the hamlet began from the direction the mouth of the bottle points to. The first water point in that direction was given the sequence code 001.

In the event that the team broke up into smaller groups to conduct the survey, the hamlet was divided into smaller regions for the group to visit. It was important that the supervisor of the team made a note of the landmarks that defined the boundaries for these regions and checked to ensure that the water points were not repeated in the survey. Each sub group was assigned a series of numbers and if the water points exceeded the number sequence, the team checked with the supervisor about the next number to assign. It was essential to ensure that number codes were not repeated.

For example if there were about 40 improved water points in a hamlet, and four groups were deployed to cover the hamlet, group 1 was assigned 001 to 014, group 2 assigned 015 to 029, group 3 assigned 030 to 044 and group 4 assigned 045 to 059. This way each group had four extra numbers for additional points. However, if there were more than four extra points in any group, the team was asked to check with the supervisor who then assigned a new range beginning from 060.

It was advised that the enumerators also hand carried a list where they also manually entered the number sequence as and when they completed the survey for a water point and also make a note of a landmark for the particular water point. This is generally not required, but as the team were first time Akvo Flow users, this process would serve as a double check. The supervisors of all teams needed to tally this list at the end of the day with the dashboard entries. An example of the sheet for manual entries is shown below. Columns 1 to 6, marked in blue are entered prior to the survey and Columns 7 to 10, marked in pink are entered during the survey. Two groups A and B are assigned serial numbers 1 to 5 and 6 to 10 in the example.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **List to be filled in manually by enumerator** | | | | | | |
| **Village : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | | | **Enumerator : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | |
| **SN** | **1** | **2** | **3** | **4** | **5** | **6** |
| **Hamlet Name** | **Water point SN** | **Type**  **(H/T/O)** | **Status (P/H)** | **Nearest Landmark** | **REMARKS** |
| **1** | Assigned to Group A and **prefilled before** reaching the water point | Assigned to Group A and **entered during the survey** |  |  |  |  |
| **2** |  |  |  |  |
| **3** |  |  |  |  |
| **4** |  |  |  |  |
| **5** |  |  |  |  |
| **6** | Assigned to Group B and **prefilled before** reaching the water point | Assigned to Group B and **entered during the survey** |  |  |  |  |
| **7** |  |  |  |  |
| **8** |  |  |  |  |
| **9** |  |  |  |  |

**Household survey:**

**Survey information:** Key WASH indicators i.e. WASH services, household behaviour patterns, participation in WASH institutions

**Survey Population**: Total population / households in 10 villages each in Ganjam district in Odisha and Samastipur district in Bihar

**Survey Sample**: The basic unit from which the sample was selected was the hamlet within each of the selected villages. Since a list of households i.e. household numbers, was not available, the method of *systematic random sampling* was used to select the sample of households. Also, since there were particular social groups that needed to be assured in the sample (i.e fisherfolk), an assigned percentage (determined by the estimated proportion of the social group in a village) of such households was purposively selected during the survey.

**Sample size:** The total sample size was assigned using a standard software, *‘Survey Monkey’*. The sample size was selected at a *Confidence Interval of 95% and 5% Margin of Error.*

The total number of sample households for the project, was then distributed proportionately (i.e. households in each village) across villages. In cases where the villages had well defined hamlets, the sample households for each village was further distributed proportionately (i.e. households in each hamlet) across hamlets.

A tentative list of samples to be selected from the project area was prepared from the available data. These changed in cases where some households had to be selected ‘purposively’ after the PRA / FGD outcomes of vulnerability mapping.

From the calculations made from existing data, the **‘sampling interval’ for Orissa was = 19 and for Bihar = 32.** The following are the distribution of sample size across villages and hamlets across districts.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project area in Ganjam District, Odisha (SAMPLING INTERVAL = 19)** | | | | | | | | |
| **SN** | **Name of GP** | **Name of Village (Revenue)** | **Name of Hamlet** | **Households (No.)\*\*** | **% share of house holds** | **Hhld Sample size (95% Confidence & 5% Margin of Error)** | **Hand pumps\*** | **Public stand post\*** |
| 1 | Agastinuagan (CT) | Agastinuagan | Agastinuagan | 328 | 5 | 17 | **39** | **63** |
| 2 | Teugu Nuagan | 248 | 4 | 13 |
| 3 | Bada Nalianugan | 300 | 4 | 16 |
| 4 | Sana Nalianuagan | 645 | 9 | 34 |
|  | **Sub total** | **1521** | **22** | **80** |
| 5 | Gedalanaidupalam | Paliachhatarpur | 340 | 5 | 18 |
| 6 | Bhagyalaxim Nager | 120 | 2 | 6 |
|  | **Sub total** | **460** | **7** | **24** |
|  | **GP Tota**l | | **1981** | **29** | **104** |
| 7 | Arjyapali | Arjyapali | Bada Arjyapali | 597 | 9 | 31 | **50** | **10** |
| 8 | Sana Arjyapali | 682 | 10 | 36 |
| 9 | Kandra Arjyapali | 561 | 8 | 30 |
|  | **GP Total** | | **1840** | **27** | **97** |
| 10 | Kanamana | Kanamana | Kanamana | 194 | 3 | 10 | **32** | **39** |
| 11 | Chasa Kanamana | 114 | 2 | 6 |
|  | **Sub total** | **308** | **4** | **16** |
| 12 | P.Chhatrapur | P.Chhatrapur | 406 | 6 | 21 |
| 13 | Taraipatpur | 190 | 3 | 10 |
|  | **Sub total** | **596** | **9** | **31** |
| 14 | Matikhala | Matikhala | 593 | 9 | 31 |
|  | **Sub total** | **593** | **9** | **31** |
| 15 | Tikiriabarhampur | Tikiriabarhampur | 293 | 4 | 15 |
|  | **Sub total** | **293** | **4** | **15** |
|  | **GP Total** | | **1790** | **26** | **94** |
| 16 | Podapad | Humuri | Humuri | 472 | 7 | 25 | **45** | **5** |
| 17 | Kumarabegapalli | Kumarabegapalli | 323 | 5 | 17 |
| 18 | Podapadar | Podapadar | 499 | 7 | 26 |
|  | **GP Total** | | **1294** | **19** | **68** |
|  | **4 GPs** | **10 Revenue villages** | **18 Hamlets** | **6905** | **100** | **364** | **166** | **117** |
| **Source : \*\* Census of India, 2011** | | | | | | | | |
| **\* Partner secondary data** | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project area in Samastipur District, Bihar (SAMPLING INTERVAL = 32)** | | | | | | | | |
| **SN** | **Block** | **Panchayat** | **Village** | **Tola Name/ Ward No** | **HH** | **% share of hhlds** | **Hhld Sample size (95% Confidence, 5% Error Margin** | **Hand Pumps / Tw\*** |
| 1 | Ujiarpur | Lakhanipur Mahespatti Deal | Lakhainipur Maheshpatti | Pasi Tola | 37 | 0.31 | 1 | 22 |
| 2 | Ujiarpur | Lakhanipur Mahespatti Deal | Lakhainipur Maheshpatti | Rai Jee Tola | 32 | 0.27 | 1 |
| 3 | Ujiarpur | Lakhanipur Mahespatti Deal | Lakhainipur Maheshpatti | Alinagar Maheshpatti | 52 | 0.44 | 2 |
| 4 | Ujiarpur | Lakhanipur Mahespatti Deal | Lakhainipur Maheshpatti | Das Jee Tola Mahespatti | 38 | 0.32 | 1 |
| 5 | Ujiarpur | Lakhanipur Mahespatti Deal | Lakhainipur Maheshpatti | Sahani Tola Maheshpatti | 40 | 0.34 | 1 |
| 6 | Ujiarpur | Lakhanipur Mahespatti Deal | Lakhainipur Maheshpatti | Mushar Toli Lakhainipur | 122 | 1.02 | 4 |
| 7 | Ujiarpur | Lakhanipur Mahespatti Deal | Lakhainipur Maheshpatti | Ray Jee Tola | 42 | 0.35 | 1 |
| 8 | Ujiarpur | Lakhanipur Mahespatti Deal | Lakhainipur Maheshpatti | Chamar Tola | 55 | 0.46 | 2 |
| 9 | Ujiarpur | Lakhanipur Mahespatti Deal | Lakhainipur Maheshpatti | Pasi Tola Maheshpatti | 72 | 0.60 | 2 |
| 10 | Ujiarpur | Lakhanipur Mahespatti Deal | Lakhainipur Maheshpatti | Sharma Tola | 42 | 0.35 | 1 |
| 11 | Ujiarpur | Lakhanipur Mahespatti Deal | Lakhainipur Maheshpatti | Shikargar Tola | 40 | 0.34 | 1 |
| 12 | Ujiarpur | Lakhanipur Mahespatti Deal | Lakhainipur Maheshpatti | Legra Chawk Maheshpatti | 28 | 0.23 | 1 |
| 13 | Ujiarpur | Lakhanipur Mahespatti Deal | Lakhainipur Maheshpatti | Malanagar Maheshpatti | 174 | 1.46 | 5 |
| 14 | Ujiarpur | Lakhanipur Mahespatti Deal | Lakhainipur Maheshpatti | Baba Chawk Maheshpatti | 64 | 0.54 | 2 |
| **SUB TOTAL LAKHANIPUR VILLAGE** | | | | | **838** | **7.02** | **26** |  |
| 15 | Ujiarpur | Lakhanipur Mahespatti Deal | Dariyapur Pataili | Dariyapur Pataili Tola | 187 | 1.57 | 6 | 1 |
| 16 | Ujiarpur | Lakhanipur Mahespatti Deal | Dariyapur Pataili | Ansari Tola | 64 | 0.54 | 2 |
| **SUB TOTAL DARIYAPUR VILLAGE** | | | | | **251** | **2.10** | **8** |
| **TOTAL LAKHANIPUR GRAM PANCHAYAT** | | | | | **1089** | **9.12** | **34** | **23** |
| 17 | Ujiarpur | Bhagwanpur Kamla | Bhagwanpur Kamla | Sahani Tola W.N. 9 | 421 | 3.53 | 13 | 56 |
| 18 | Ujiarpur | Bhagwanpur Kamla | Bhagwanpur Kamla | Ram Tola | 53 | 0.44 | 2 |
| 19 | Ujiarpur | Bhagwanpur Kamla | Bhagwanpur Kamla | Dhuniya Tola | 12 | 0.10 | 0 |
| 20 | Ujiarpur | Bhagwanpur Kamla | Bhagwanpur Kamla | Paswan Tola East W.N. 10 | 23 | 0.19 | 1 |
| 21 | Ujiarpur | Bhagwanpur Kamla | Bhagwanpur Kamla | Paswan Tola West | 37 | 0.31 | 1 |
| 22 | Ujiarpur | Bhagwanpur Kamla | Bhagwanpur Kamla | Nonfar Tola Bhagwanpur Kamla Dih | 143 | 1.20 | 4 |
| 23 | Ujiarpur | Bhagwanpur Kamla | Bhagwanpur Kamla | Brahman Tola North | 66 | 0.55 | 2 |
| 24 | Ujiarpur | Bhagwanpur Kamla | Bhagwanpur Kamla | Brahman Tola South | 79 | 0.66 | 2 |
| 25 | Ujiarpur | Bhagwanpur Kamla | Bhagwanpur Kamla | Bhagwanpur Kamla | 239 | 2.00 | 8 |
| 26 | Ujiarpur | Bhagwanpur Kamla | Bhagwanpur Kamla | Andaha Kamla (Middle) W.N. 13 | 220 | 1.84 | 7 |
| 27 | Ujiarpur | Bhagwanpur Kamla | Bhagwanpur Kamla | Andaha Kamla (North) W.N. 13 | 308 | 2.58 | 10 |
| **SUB TOTAL BHAGWANPUR KAMLA VILLAGE** | | | | | **1601** | **13.41** | **50** |  |
| 28 | Ujiarpur | Bhagwanpur Kamla | Saidpur Jahid | Ram Tola W.N. 7 | 23 | 0.19 | 1 | 27 |
| 29 | Ujiarpur | Bhagwanpur Kamla | Saidpur Jahid | Paswan Tola W.N. 6 | 179 | 1.50 | 6 |
| 30 | Ujiarpur | Bhagwanpur Kamla | Saidpur Jahid | Paswan Toli | 28 | 0.23 | 1 |
| 31 | Ujiarpur | Bhagwanpur Kamla | Saidpur Jahid | Dhuniya Tola | 48 | 0.40 | 2 |
| 32 | Ujiarpur | Bhagwanpur Kamla | Saidpur Jahid | Badi Masjid Tola W.N. 5 | 34 | 0.28 | 1 |
| 33 | Ujiarpur | Bhagwanpur Kamla | Saidpur Jahid | Saidpur Jahid W.N. 3 | 189 | 1.58 | 6 |
| 34 | Ujiarpur | Bhagwanpur Kamla | Saidpur Jahid | Ram Tola | 63 | 0.53 | 2 |
| 35 | Ujiarpur | Bhagwanpur Kamla | Saidpur Jahid | Saidpur Jahid W.N. 2 | 263 | 2.20 | 8 |
| 36 | Ujiarpur | Bhagwanpur Kamla | Saidpur Jahid | Saidpur Jahid W.N. 5 | 315 | 2.64 | 10 |
|  | **SUB TOTAL SAIDPUR JAHID VILLAGE** | | | | **1142** | **9.57** | **36** |  |
|  | **TOTAL BHAGWANPUR KAMLA GRAM PANCHAYAT** | | | | **2743** | **22.98** | **86** | **83** |
| 37 | Ujiarpur | Raipur | Raipur | Sthan Tola W.N. 9 | 313 | 2.62 | 10 | **50** |
| 38 | Ujiarpur | Raipur | Raipur | Sthan Tola W.N. 11 | 43 | 0.36 | 1 |
| 39 | Ujiarpur | Raipur | Raipur | Saw Tola W.N. 13 | 123 | 1.03 | 4 |
| 40 | Ujiarpur | Raipur | Raipur | Saw Tola W.N. 12 | 128 | 1.07 | 4 |
| 41 | Ujiarpur | Raipur | Raipur | Sharma & Sahani Tola W.N. 10 | 286 | 2.40 | 9 |
| 42 | Ujiarpur | Raipur | Raipur | Bhabhan Toli W.N. 6 | 116 | 0.97 | 4 |
| 43 | Ujiarpur | Raipur | Raipur | Vishwakarma Sthan W.N. 7 | 448 | 3.75 | 14 |
| 44 | Ujiarpur | Raipur | Raipur | Giri Tola W.N. 8 | 724 | 6.07 | 23 |
|  | **SUB TOTAL RAIPUR VILLAGE** | | | | **2181** | **18.27** | **69** |  |
| 45 | Ujiarpur | Raipur | Ujiarpur | Ujiarpur W.N. 3 | 490 | 4.10 | 15 | **21** |
| 46 | Ujiarpur | Raipur | Ujiarpur | Ujiarpur W.N. 1 | 89 | 0.75 | 3 |
| 47 | Ujiarpur | Raipur | Ujiarpur | Ujiarpur W.N. 2 | 514 | 4.31 | 16 |
| 48 | Ujiarpur | Raipur | Ujiarpur | Khanua W.N. 5 | 161 | 1.35 | 5 |
| 49 | Ujiarpur | Raipur | Ujiarpur | Ujiarpur W.N. 4 | 106 | 0.89 | 3 |
|  | **SUB TOTAL UJIARPUR VILLAGE** | | | | **1360** | **11.39** | **43** |  |
| 50 | Ujiarpur | Raipur | Madhopur | Madhopur W.N. 14 | 249 | 2.09 | 8 | **2** |
|  | **SUB TOTAL MADHOPUR VILLAGE** | | | | **249** | **2.09** | **8** |  |
|  | **TOTAL RAIPUR GRAM PANCHAYAT** | | | | **3790** | **31.75** | **119** | **73** |
| 51 | Sarairanjan | Barbatta | Barbatta | Math Tola W.N. 11 | 123 | 1.03 | 4 | **85** |
| 52 | Sarairanjan | Barbatta | Barbatta | Barbatta W.N. 4 | 185 | 1.55 | 6 |
| 53 | Sarairanjan | Barbatta | Barbatta | Barbatta W.N. 3 | 132 | 1.11 | 4 |
| 54 | Sarairanjan | Barbatta | Barbatta | Barbatta W.N. 2 | 127 | 1.06 | 4 |
| 55 | Sarairanjan | Barbatta | Barbatta | Barbatta W.N. 5 | 239 | 2.00 | 8 |
| 56 | Sarairanjan | Barbatta | Barbatta | Barbatta W.N. 6 | 93 | 0.78 | 3 |
| 57 | Sarairanjan | Barbatta | Barbatta | Barbatta W.N. 7 | 135 | 1.13 | 4 |
| 58 | Sarairanjan | Barbatta | Barbatta | Barbatta W.N. 8 | 218 | 1.83 | 7 |
| 59 | Sarairanjan | Barbatta | Barbatta | Barbatta W.N. 9 | 276 | 2.31 | 9 |
| 60 | Sarairanjan | Barbatta | Barbatta | Barbatta W.N. 10 | 348 | 2.92 | 11 |
| 61 | Sarairanjan | Barbatta | Barbatta | Salempur W.N. 12 | 203 | 1.70 | 6 |
| 62 | Sarairanjan | Barbatta | Barbatta | Barbatta W.N. 13 | 189 | 1.58 | 6 |
|  | **SUB TOTAL BARBATTA VILLAGE** | | | | **2268** | **19.00** | **71** |  |
| 63 | Sarairanjan | Barbatta | Soapakar | Kali Sthan Tola W.N. 1 | 342 | 2.87 | 11 | **10** |
|  | **SUB TOTAL SOAPAKAR VILLAGE** | | | | **342** | **2.87** | **11** |  |
|  | **TOTAL BARBATTA GRAM PANCHAYAT** | | | | **2610** | **21.86** | **82** | **95** |
| 64 | Sarairanjan | Rupauli Buzurg | Rupauli Buzurg | Bandhara Tola W.N. 7 | 156 | 1.31 | 5 | 60 |
| 65 | Sarairanjan | Rupauli Buzurg | Rupauli Buzurg | Nonfar & Ram Toli W.N. 8 | 195 | 1.63 | 6 |
| 66 | Sarairanjan | Rupauli Buzurg | Rupauli Buzurg | Ward No. 9 | 90 | 0.75 | 3 |
| 67 | Sarairanjan | Rupauli Buzurg | Rupauli Buzurg | Ward No. 10 | 109 | 0.91 | 3 |
| 68 | Sarairanjan | Rupauli Buzurg | Rupauli Buzurg | Ward No. 11 | 191 | 1.60 | 6 |
| 69 | Sarairanjan | Rupauli Buzurg | Rupauli Buzurg | Ward No. 3 | 153 | 1.28 | 5 |
| 70 | Sarairanjan | Rupauli Buzurg | Rupauli Buzurg | Ward No. 4 | 193 | 1.62 | 6 |
| 71 | Sarairanjan | Rupauli Buzurg | Rupauli Buzurg | Ward No. 2 | 230 | 1.93 | 7 |
| 72 | Sarairanjan | Rupauli Buzurg | Rupauli Buzurg | Ward No. 1 | 176 | 1.47 | 6 |
| 73 | Sarairanjan | Rupauli Buzurg | Rupauli Buzurg | Ward No. 5 | 212 | 1.78 | 7 |
|  | **SUBTOTAL RUPALI BUZURG VILLAGE** | | | | **1705** | **14.28** | **54** |
|  | **TOTAL RUPALI BUZURG GRAM PANCHAYAT** | | | | 1705 | 14.28 | 54 | 60 |
|  | **TOTAL** | | | | **11937** | **100.00** | **375** | **334** |

**Survey execution:**

**Field methodology:** Considering the hamlet to be the lowest administrative unit of the survey, the entire survey team first went to the center of the hamlet to start the survey. Following the bottle method (described earlier) the first household was assigned the sequence code 001.

The next household was selected according to the **sampling interval** for each hamlet. The sampling interval is calculated by dividing the total number of households in each hamlet by the sample size of the hamlet. For example, if the enumerator had surveyed the household with a serial number 020 and the sampling interval for the hamlet was 10, the next household would be the 10th. household from the one surveyed last and would have a serial number 030. The next household would be numbered 040 and so on.

The survey team covered households by moving in a clockwise direction from one household to another in the designated area. If, by chance a household did not conform to the survey guidelines (i.e. the house is locked or the respondent did not want to answer), the enumerator moved to the next house on the right.

In the event that the team was split into smaller groups, the hamlet was divided into smaller regions. It was important that the supervisor of the team made a note of the landmarks that defined the boundaries for these regions and checked to ensure that the households were not repeated in the survey. Each sub group was assigned a series of numbers and if the households exceeded the number sequence, they checked with their supervisors for the new numbers to assign.

As the total sample size for each hamlet was fixed it ensured that at least these numbers were covered. The team also surveyed a few extra households for safety. However, this was done under supervision to ensure that the numbers did not affect the final analysis adversely.

During a household survey the enumerator was required to enter the code of the water point which was the primary source of drinking water for the household. This was obtained from the water point survey and the manual sheet prepared during the water point survey which included a landmark for the water point. *This step was necessary to ensure that the household and water point surveyed could be synced later.*

In the event that the household was found not to be using an improved source, there was no corresponding water point code to be entered.

The enumerators were also recommended to keep a manual record for the household number and the corresponding water point.