**ANN - 1.1**

**Baseline study for Fisheries Development in Telangana state**

Baseline study work plan

**3.0 Study design and methodology description**

AFC Study team has devised a suitable methodology for carrying out the tasks as defined in the approved TOR. Based on the recommended sampling design for survey, stratified purposive sampling approach would be adopted.

For the collection of primary data on tank resources and other small water bodies, stratified three stage sampling will be adopted where districts, clusters and ponds form the three stages respectively. The existing 31 districts of the state are divided into three nearly homogeneous strata (each stratum with a given a number of districts-10-11) based on climate, rainfall, soil quality, resource spread, intensity and diversity of fisheries and aquaculture activities. The strata formed takes in to account, the geographical contiguity of districts as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **All Districts** | | **Selected Study districts** |
| **Stratum - I** | 1. Adilabad | 1. Nirmal | 1. Kamareddy |
| 1. Kumuram Bheem | 1. Mancherial | 1. Karimnagar |
| 1. Nizamabad | 1. Jagityal | 1. Mancherial |
| 1. Kamareddy | 1. Rajanna Sircilla |  |
| 1. Karimnagar | 1. Peddapalle |  |
|  |  |  |  |
| **Stratum – II** | 1. Sangareddy | 1. Medak | 1. Medak, , |
| 1. Siddipet | 1. Vikarabad | 1. Rangareddy |
| 1. Rangareddy | 1. Hyderabad | 1. Wanaparthy |
| 1. Medchal | 1. Mahabubnagar |  |
| 1. Wanaparthy | 1. Jogulamba Gadwal |  |
| 1. Nagarkurnool |  |  |
|  |  |  |  |
| **Stratum–III** | 1. Jayashankar | 1. Bhadradri Kothagudem | 1. Bhadradri Kothagudem |
| 1. Mahabubabad | 1. Warangal (Rural) | 1. Mahabubabad |
| 1. Warangal (Urban), | 1. Jangaon | 1. Yadari Bhuvanagiri |
| 1. Yadari Bhuvanagiri | 1. Nalgonda |  |
| 1. Suryapet | 1. Khammam |  |
|  |  |  |  |

For sampling, three districts from each stratum are selected in due consultation with the Department of Fisheries, GOT based on critical aspects of resource spread, diversity, sector related activities and performance, contribution and untapped potential etc.

Within each selected districts nine village clusters (each cluster with 5 contiguous villages and each village having at least one resource type) spread across different Mandals are selected randomly for the detailed study. Thus altogether 45 villages /district will form the study units.

For the collection of primary data from the reservoir resources stratified three stages sampling withFishing Village Approach (FVA) or Landing Centre Approach (LCA) for reservoirs/dams will be followed. Here the sampling size of about 25-30% resources within each sampling units (village clusters) to be carried out depending on number, size, seasonality etc.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sampling design** | | | | | | | | | | | | | | | |
|  |  |  | **Stratum - I** | | |  | **Stratum - II** | | |  | **Stratum - III** | | |  | **3** |
|  | **Telangana State** |  | **10 districts** | | |  | **11 districts** | | |  | **10 districts** | | |  | **31** |
|  | **Study districts** |  | 1 | 2 | 3 |  | 4 | 5 | 6 |  | 7 | 8 | 9 |  | **9** |
|  | **Study Clusters** |  | 9 | 9 | 9 |  | 9 | 9 | 9 |  | 9 | 9 | 9 |  |  |
|  |  |  | 27 | | |  | 27 | | |  | 27 | | |  | **81** |
|  | **Villages/cluster** |  | 5 | 5 | 5 |  | 5 | 5 | 5 |  | 5 | 5 | 5 |  |  |
|  | **Villages/district** |  | 45 | 45 | 45 |  | 45 | 45 | 45 |  | 45 | 45 | 45 |  |  |
|  | **Total no. of villages** |  | 135 | | |  | 135 | | |  | 135 | | |  | **405** |
|  |  |  | Survey of resource characteristic in each village along with infrastructure, institutional arrangements and support services | | | | | | | | | | | | |
|  |  |  | Interaction and interface with beneficiaries through group approach | | | | | | | | | | |  |  |
|  |  |  | Documenting case studies and success stories | | | | | | | |  |  |  |  |  |

The selection of study districts and the sampling units (village clusters) will be made in consultation with the DOF officers to make sure that these sample sites satisfy defined criteria.

**4.0 Study plan**

The task wise data will be collected from the study villages both through field survey and ground truth by enumerators under the guidance and technical support of task experts. Similarly, there will be supplementation by the experts through interaction/ discussions/ FGD etc. at different levels. Detailed Data matrix for work plan given in **Annexure-I** covers in detail the data base in terms of resources, activities, markets, institutions, infrastructure, HRD and polices & strategies which forms the basis for developing a work plan.

**4.1 Sample size** for each task and study approach, several number of interviews, meetings/FGD’s, Key informants interactions, interviews with other respondents etc. fishers, boat builders, input suppliers and fish vendors etc. will be carried out

**4.2 Field studies** also include resource characterization, description of present resource use pattern, practices in adoption, related gaps, collection of water quality samples, other physical and chemical parameters, Laboratory Parameters and Analysis, documentation of fish composition, fishing effort etc. and analysis for estimation of productivity; review of present resource use, fishing / farming practice, status of support service systems both govt. and private institutions/organization, infrastructure, policy gaps, case studies / success story documentation, Photo documentation etc.

**4.3 The applied methodologies in the study** wouldinclude group discussions, structured interviews, semi-structured interviews, and some PRA tools, Analysis Matrix, Time Trends etc. The same survey process and methodologies will be used for all the study districts.

**4.4 Data collection**

As per the requirement under the study, AFC study team will collect relevant primary/secondary data from the concerned beneficiaries, departments/agencies through different study tools.

For primary data, different collection methods will be used viz., a) community consultation through group discussion and one-to-one interview, stakeholder’s performance, opinions, perception using specifically designed and pre-tested questionnaire; key informant interviews using checklists.

Based on the data list, structured questionnaires/schedules/formats in respect of beneficiaries sample survey, Case Studies, Farmers Group Discussions are developed.

The study involves devising suitable questionnaires/formats/posers etc. for carrying out one to one and one- to many discussions, conducting Focused Group Discussions etc. with all key stakeholders to collecttheir views and opinions for improvement. The tools/approach to be used is given in **Annexure-II** and is linked to the various stakeholders like Department of Fisheries, Panchayathraj institutions, institutional stakeholders and producers. Under each task, a list of data to be collected has been developed with clear indication of data sources and data collection methodologies apartment from the process, output and application. Going further, this is link to action plan points and working modalities. The working modalities also indicate the responsibility of individual experts and their deliverables.

Exclusive interviews will also be carried out for capturing all relevant and comprehensive information from the key stakeholders viz., fishers, aqua culturists, DOF officers, different agencies/individuals etc, and document case studies / best practices wherever possible.

**Secondary data would be sourced through a planned approach**

* At state and study district level- Annual targets and achievements for the preceding three / five years (depending on the availability)
* Annual and periodical reports, proposals, proposed programs /schemes/plans formulated by DOF and under implementation
* Literature Review (documents, published/un published information and records for the study area and of state
* Organogram /organization structure of DOF/ at state, district and field levels/roles and responsibilities, span of control, delegation of powers at different levels, HR Policies
* Lists of key informant and other stake holders – fishers, input suppliers, other service providers planners, tutorials (R&D and KT institutions), civic soc. Members, representatives of local institutions- FCS, SHGs etc
* Details about Budgeting- objectives, basis, determination of annual budgets, allocation procedure and processes, auditing norms, Budgetary control system in place, issues relating to expenditure accounting and related policies on finances
* Policies on levy of cess/ fees/charges , rents/rates/taxes collected , leasing policies, and related fiscal measures

**4.5 QC and data management**

Quality control will be exercised andcompliance to ensure proper sample collection, handling and analysis– centralized data management & analysis, documentation

Sampling Personnel will be trained on **h**ow to collect samples, data in accordance to schedules/posers /formats, filling of field data sheets and review for completeness and possible errors.

The field studies of enumerators at each stratum level will be monitored and supervised by the Stratum level team leaders who will visit the selected sites, confirm/ validate the data and guide the investigators on the methodologies to be followed in carrying out the study.

**4.6 Data processing and analysis**

* The data / information recorded by field enumerator’s team in the data collection sheets (questionnaire and hand written data / information sheets) will be subjected for checking and/or clarification.
* The collected data / information would then be entered into a database and organized by category and informant group under each task.
* They will be summarized at the study district level by indicators and informant group, later computed/ extrapolated from the selected stratum into the state.
* **Quantitative data** will be processed, analyzed and organized in tables by using appropriate statistical packages and Microsoft Excel.
* **Descriptive statistical values** including frequency counts, percentage, minimum/maximum values and average etc will be calculated in order to explain distribution and general characteristics.
* **Qualitative information** will be used to provide in-depth description of and analysis for each output and to compliments the quantitative data.

**5.0 Reports and Reporting**

The report will be produced for the study at different levels

1. Work plan report
2. Interim report
3. Draft final report
4. Final Report

**6.0 Deliverables time schedule**

The study duration is five months and the AFC is expected to adhere to the following timelines and deliverables.

|  |  |
| --- | --- |
| **Deliverables** | **Time lines** |
| * Work plan submission | One month after issuance of Work Order & TOR (End of May 2017), |
| * Field Data Collection (Interim report) | Two months from date of work plan approval ( June-July, 2017) |
| * Draft report Submission | One month after field data collection (September, 2017) |
| * Final Report Submission | One month from draft report submission (October,2017) |
|  |  |
|  |  |