

1. Title of the Project: म.प्र. जल निगम मर्यादित द्वारा क्रियान्वित बैढन-2, ग्रामीण समूह, चितरंगी ब्लॉक, जिला सिंगरौली, मध्यप्रदेश के जल प्रदाय योजना के अंतर्गत वन्यप्राणियों/बायोडायवर्सिटी पर पड़ने वाले प्रभाव का अध्ययन

Why this Project:-

This project funded by M.P. Jal Nigam Limited, Project Implementation Unit, Singrauli. The study on impact of Waidhan-2 multi-village rural water supply scheme, on Biodiversity in Chitrangi Block, District Singrauli. Government of India has recently launched Jal Jeevan Mission (JJM) which aims at providing Functional Household Tap Connection (FHTC) to every rural household by 2024. The programme focuses on service delivery at household level, i.e. water supply on regular basis in adequate quantity and of prescribed quality. The area of Pipeline Distribution under protected area is 84.184 ha. Length of pipeline in protected forest area 184198 m, length of pipeline in revenue area is 657642 m and total length of pipeline is 841840 m. Total study area of Singrauli district 766 km², pipeline distribution area 336.11 km² and area of buffer zone 430 km². Son River covered in project area is 48.683 km. different species of wildlife animals and vegetation is important to manage the ecosystems. Conservation of forest automatically ensures the conservation of a large number of floral and faunal species and, in fact, that of the entire ecosystem. Thus the genetic diversity of an ecosystem can be saved through properly planned forest conservation programme. Wildlife conservation activities mainly involves attempts to prevent any species from becoming extinct the natural habitat.

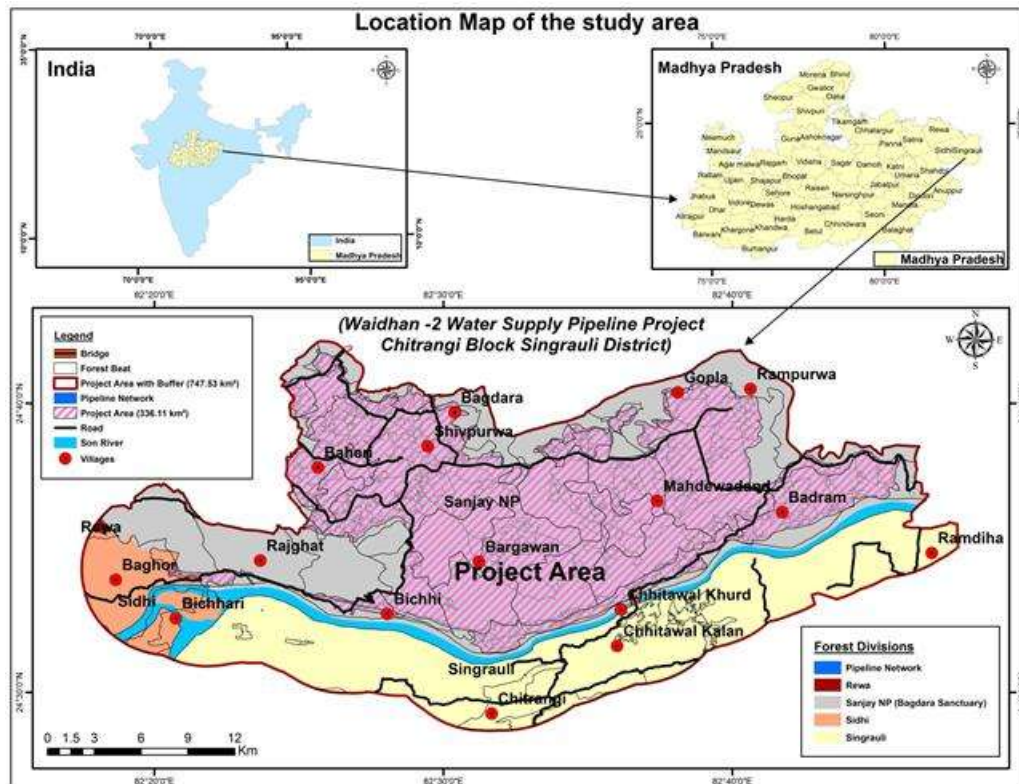
Research Methodology:-

The study was performed by adopting standard methodology according to National Tiger Conservation Authority for field surveys in the study area on following points.

1. **Collection of secondary data:-** Pre-existing data was collected through various secondary sources. Review of previous studies of this area.
2. **Collection of primary data from study area:-**
 - Data collection from transects and trails from each beat of the forest.
 - Inventory of aquatic and terrestrial flora-fauna and their critical habitats.
 - Data collection to estimate floristic composition and structure of the study area.
 - Collection of Direct and indirect sign of Carnivore and Ungulates.
 - Observation on Physico-chemical properties of Son river water.
 - Conduct questionnaire survey to understand the magnitude of their drinking water problem and the perception of local people about the project in the study area.
 - Recommendation and mitigation measures

Study Design:-

The study area is proposed to cover about 766.06 km² including 10 km buffer area. The pipeline network area is 336.12 km² and the buffer area is about 429.94 km². Field observation will be carried out as per the points mentioned in methodology.



Location of study area of Waidhan-2, Water Supply Pipeline Project

Objectives of Research :

- Vegetation survey of study area.
- Assessment of the current wildlife status of the project area through wildlife sign survey, transect line, camera trapping and direct evidence.
- Predict and identify the impact of proposed project on the ecology, existing flora and fauna.
- Habitat improvement plan for existing wildlife of the area.
- Recommend the mitigation measures based on findings of the study.

Activities Undertaken :-

- Reconnaissance survey and selection of sampling sites and review of water supply project DPR
- Collection of secondary data.
- Study design and preparation of formats.
- Selection of Project staff as per requirements.
- Procurement of material / tools/ instruments/ accessories required for study.
- Collection of primary data on existing biological resources – Faunal – Floral species distribution and their habitat conditions.
- Water quality analysis for pH, DO, EC, TDS, ORP, Total Hardness, Turbidity, COD, BOD, Temperature, Chloride, Boron, Fluoride, Nitrate, Phosphate, Total coliform etc.
- Social Questionnaire Survey in the villages of study area.
- Mitigation measures to minimize the adverse impacts of the proposed project

Cost of the project- Rs 69.09 lakhs

Expected Output of Research:-

- Explored the vegetation wildlife including Birds, available water sources, physico-chemical status of soil and drinking water problems in the study area.
- Predict the expected impacts of the project -
 - The removal of trees of laying out the pipelines.
 - 89.669 ha area is to be used for the pipeline construction.

- During operational phase machine and vehicles may cause disturbance to wild animals.
- There is no direct threat neither to terrestrial nor aquatic animals species be causes adjoining forest area and water bodies provide good shelter to this placed wildlife.
- There are following suggested measured –
 - Compensatory afforestation to compensate the loss of forest cover.
 - Added the grass plots and fodder plantation.
 - Proper management of dominant invasive species i.e. *Lantana camara*, *Partheniumhysterophorus*, *Hyptissuaveolens*, *Ageratum conyzoides*, *Argemone Mexicana*.
 - Grassland development for habitat improvement in the study area



Meeting with GM and Team (Jal Nigam)



Site View



Trail and Transect line survey



Sign survey and data collection for Carnivore on trail



Water pipeline construction sites



Social Survey



Nilgai



Blackbuck