

Forest Utilization Research Division

Title of the Project:- Survey, Population Density and Quantitative Assessment of Medicinal Plants for the Sustainable Development of Livelihood Generation in Jabalpur Forest Circle (M.P.)

Why this Project:-

This Project was funded by NMPB, New Delhi to estimate to population density, production potential and capable MAPs for livelihood generation in 5 Forest divisions namely Jabalpur, Katni, West Mandla, East Mandla and Dindori forest division of Jabalpur Forest Circle.

Research Methodology :-

The research methodology for this project has been followed as prescribed in training manual prepared and published during the training program by Verma, Dharmendra & S.K. Masih, 2017; Rai, C.P., R.K. Pandey & S.K. Masih, 2011.

Study Design : To complete the objective of the project following design has been adopted:-

- Preparation and publication of survey manual to disseminate survey methodology for front line forest field staff (Beat Guard)
- Training for front line forest field staff (Beat Guard)
- Resource Survey in identified potential area/ medicinal plant rich area.
- Focused group discussion program (FGDPs) in identified JFMCs
- Data collection, computation
- Drafting of project report and submission

Objective of Research:-

- Estimation of population density, production potential and livelihood generation capabilities of medicinal plants.

Activities Undertaken:-

- Data Computation, Data Analysis, Drafting of project report, finalization of project report, submission of project report

Cost of the project: Rs.51.58 Lakhs

Outcome of the project:-

- Training programs were organized in all 37 ranges of respective forest divisions of JFC. During 22 training programs, 1615 beneficiaries were trained. Out of which Jabalpur, Katni, West Mandla, East Mandla and Dindori forest divisions represented 316, 360, 283, 376 and 280 beneficiaries respectively.
- The analysis of population density has been carried out with reference to local name, botanical name, family name, habit, part used and uses of all the species and recorded.
- A total of 100 plant species of economically and commercially important MAPs and NTFPs having 46 trees, 15 shrubs, 10 climbers and 29 herbs from 7 ranges of Jabalpur forest division were analyzed.
- A total of 93 plant species of economically and commercially important MAPs and NTFPs having 41 trees, 16 shrubs, 11 climbers and 25 herbs from 6 ranges of Katni forest division were analyzed.
- A total of 88 plant species of economically and commercially important MAPs and NTFPs having 34 trees, 16 shrubs, 11 climbers and 27 herbs from 6 ranges of East Mandla forest division were analyzed.
- A total of 135 plant species of economically and commercially important MAPs and NTFPs having 73 trees, 17 shrubs, 12 climbers and 33 herbs from 8 ranges of West Mandla forest division were analyzed.

- A total of 67 plant species of economically and commercially important MAPs and NTFPs having 28 trees, 11 shrubs, 4 climbers and 24 herbs from 10 ranges of Dindori forest division were analyzed.
- A total of 143 plant species of economically and commercially important MAPs and NTFPs were analyzed from Jabalpur Forest Circle. Out of which tree, shrub, climber and herb category represents 81, 17, 12 and 33 species respectively.
- Total 48 (100%) economically and commercially important MAPs and NTFPs species has been recorded from all 5 forest divisions.
- 27 (80%) economically and commercially important MAPs and NTFPs species were distributed in 4 forest divisions.
- 20 (60%) economically and commercially important MAPs and NTFPs species, distributed in 3 forest divisions.
- 27 (40%) economically and commercially important MAPs and NTFPs species were distributed in 2 forest Divisions.
- 21 (20%) economically and commercially important MAPs and NTFPs species were distributed only in 1 forest division.
- The distribution of these species is mostly localized. Due to over exploitation, unsustainable harvesting practices, illicit felling, improper collection practices, etc., the density and quantity of these species is reducing day by day in the forest areas. To enhance the number, density and population of these species, especially an urgent attention is required for the species falling under 20% and 40% distribution class requires management practices such as their in-situ and ex-situ conservation, propagation, cultivation, plantation, etc.
- Estimated Production Potential (EPP) of each division has been analyzed and determined. The sum of EPP value of each plant species found in all the 05 forest divisions is projected as EPP of Jabalpur forest circle.
- Total 17 plant species of Tree category were found well distributed in all the 05 forest divisions of Jabalpur forest circle. These species are Achar (3228842.04 q), Amaltash (673202.23 q), Aonla (5092720.16 q), Bael (6754123.85 q), Baheda (1032703.96 q), Bhilwa (760173.37 q), Bija (775904.56 q), Dhawa (80072.41 q), Gunja (26635.49 q), Haldu (17244.98 q), Harra (2203058.14 q), Jamun (592023.92 q), Kumbhi (13725.16 q), Kusum (841773.47 q), Mahua (20242941.64 q), Palash (168557.34 q) and Tendu (1554124.77 q). The Estimated Production Potential (EPP) of above mentioned plant species of MAPs and NTFPs and their estimated production in 9720 ha. area of Jabalpur Forest Circle.
- Total 08 plant species of Shrub and Climber category were found well distributed in all the 05 forest divisions of Jabalpur forest circle. These species are Aak/Akua (20251231.2q), Arandi (273520.8q), Bela dudhi (1856.52q), Dhawai/Dhawda/Dhawal (2392675.2 q), Karonda (141800900.4 q), Mainhar/ Manhar (604778.4 q), Marorphali (35001817.2 q) and Nirgundi/Nagar (38912270.4 q). The Estimated Production Potential (EPP) of above mentioned plant species of MAPs and NTFPs and their estimated production in 9720 ha. area of Jabalpur Forest Circle.
- Total 14 plant species of Herb category were found well distributed in all the 05 forest divisions of Jabalpur forest circle. These species are Babchi (431891.97 q), Baramasi 2635869.6 q), Bhrangraj (688543.22 q), Bhui aonla (21953578.1 q), Chakoda (204150702.4 q), Gokharu (11695287.61 q), Jungli Pyaz (27767739.57q), Kalmegh (3639945.6 q), Nagarmotha (56951208.02 q), Naibuti (10729778.43 q), Punrnawa (10913597.53 q), Safed Musli (329468251.5 q), Tinpatiya (897058.8 q) and Van tulsi (53561074.2 q). The Estimated Production Potential (EPP) of above mentioned plant species of MAPs and NTFPs and their estimated production in 9720 ha. area of Jabalpur Forest Circle.
- On the basis of analysis of FGDPs, total 58 commercially and economically important MAPs and NTFPs collected with their parts and products.

- During the analysis, a total of 192 plant species of economically and commercially important MAPs and NTFPs were scrutinized, out of which Jabalpur, Katni, West Mandla, East Mandla and Dindori Forest Divisions representing 40,34,39,39 and 40 plant species respectively.

Deliverable technologies developed in each project for stakeholders, forest professionals, field foresters and other beneficiaries.

- Survey and Assessment Manual

Trainings to frontline forest staff

| S. No. | Program | Organized by | Venue | Date | Target Group | No. of Participants |
|--------|----------|--------------|--|--------------------------|--|---------------------|
| 1 | Training | Project Team | Shahpura, Panagar, Jabalpur, Kundam, Bargi, Dheemarkheda, Barhi, Katni, Bahoriband, Niwas, Kalpi, Tatari, Mandla, Anjaniya, Bichhiya, Mohgaon, Mehandwani, Shapura, Shahpur, Dindori, East Karanjija, Chanda | 18.12.2017 to 28.04.2018 | frontline forest staff, beat guards, rangers, SDOs, local traders and JFMC members | 1615 |

Trainings to JFMC members

| S. No. | Program | Organized by | Venue | Target Group | Number of Participants |
|--------|---------|--------------|---|--------------------------------|------------------------|
| 1 | FGDP | Project Team | Shahpura, Patan, Panagar, Sihora, Bargi, Kundam, Jabalpur, Deemarkheda, Badwara, Katni, Rithi, Vijayraghvarh, Bahoriband, Niwas, Kalpi, Barela, Bijadandi, Tikariya, Mandla, Maharajpur, Bamhni, Jagmandal, Bichhiya, Mawai, Mohgaon, Motinala, Ghughri, Shahpura, Mehndani, Shahpur, Dindori, Amarpur, North Samnapur, West Karanjija, East Karanjija, South Samnapur, Bajag | local traders and JFMC members | 1020 |



Training Program - Katni Forest Division



Training Program – Shahpura Range, Jabalpur Forest Division



Field Demonstration of sample plot in West Mandla Forest Division



Field Demonstration of sample plot in Katni Forest Division



Training Program – North Samanapur Range, Dindori Forest Division



FGD at Gadghorakhpur Beat, Bargi Range, Jabalpur Forest Division



FGD at Aeri Beat, Ghughari Range, East Mandla Forest Division



FGD at Devgaon Beat, Mohgaon Range, East Mandla Forest Division