

Detailed Project Report on “**Geospatial Analytics & Remote Sensing Services
for Agriculture and Natural Resources.**”

Client: ABC Analytics LLP

Location: Pune City, Maharashtra, India

Background: The project proposes establishing a geospatial consultancy providing a wide range of services including: crop acreage estimation & yield forecasting, watershed planning & land suitability analysis, DPR preparation & technical reports, and GIS mapping & UAV-based high-resolution mapping (outsourced initially). Report prepared for: submission to financial institutions / banks / government agencies.

for project appraisal & financial assistance.

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“Detailed Project Report (DPR) on Geospatial Analytics & Remote Sensing Services for Agriculture and Natural Resources”

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1.0 Executive Summary

Project Title: Geospatial Analytics & Remote Sensing Services for Agriculture and Natural Resources

Promoter & Company: ABC Analytics LLP

Promoter: Mr. XYZ

Promoter Background:

- Education: M.Tech in Geoinformatics & Remote Sensing
- Experience: GIS mapping, agriculture projects, and consultancy
- Objective: To provide affordable, reliable, and application-oriented geospatial intelligence to farmers, FPOs, startups, NGOs, and government agencies

Project Location:

Pune City, Maharashtra – strategically selected for its technological ecosystem, proximity to research institutions, startups, and diverse agro-climatic regions.

Project Description:

The project proposes establishing a geospatial consultancy providing a wide range of services including:

- Crop acreage estimation & yield forecasting
- Watershed planning & land suitability analysis
- DPR preparation & technical reports
- GIS mapping & UAV-based high-resolution mapping (outsourced initially)

The consultancy will combine satellite imagery, GIS, and UAV data to provide actionable insights for agriculture and natural resource management projects.

Project Cost & Financing:

- Total Project Cost: ₹32.00 Lakhs
- Major Cost Components:

- High-performance workstations
- Licensed & open-source GIS software
- Satellite data procurement
- Office setup & branding
- UAV mapping (outsourced)
- Means of Finance:
 - Promoter Contribution: ₹18.00 Lakhs (56.25%)
 - Bank / Mudra / Stand-Up India Loan: ₹14.00 Lakhs (43.75%)

Table: Project Cost Summary

Particulars	Amount (₹ Lakhs)
Office Setup, Interiors & Furniture	5.50
Hardware & Workstations	12.00
Software & Data Procurement	6.50
Office Deposit & Initial Rent	3.00
Pre-operative Expenses	2.50
Contingencies	2.50
Total	32.00

Implementation Schedule:

- Duration: 3–4 months
- Key Phases:
 - Business registration & legal formalities
 - Office setup & IT infrastructure installation
 - Recruitment & SOP development
 - Marketing & pilot projects initiation

Figure: Project Implementation Timeline (Gantt Chart Placeholder)

Market Opportunity:

- Growing demand for geospatial services in agriculture, FPOs, startups, NGOs, and government departments
- Existing gap in affordable, application-oriented, and technically robust geospatial consultancies
- Competitive advantage through niche focus on agriculture and natural resources

Target Clients: FPOs, agri-startups, NGOs/CSR projects, government agencies

Technical & Operational Plan:

- Hardware & Software: High-performance computing, open-source and licensed GIS/remote sensing tools
- Data Sources: Multi-temporal satellite data, UAV mapping through empaneled service providers
- Workflow: Data acquisition → preprocessing → spatial analysis → validation → reporting
- Quality Control: Field verification, peer review, and standard documentation protocols
- Data Security: Controlled access, backups, and compliance with data confidentiality regulations

Revenue Model & Financial Highlights:

- Revenue Streams: Project-based fees for crop studies, DPRs, GIS mapping, UAV surveys, and retainer contracts
- Annual Revenue Projections:
 - Year 1: ₹56.00 Lakhs
 - Year 2: ₹72.00 Lakhs
 - Year 3: ₹88.00 Lakhs
- Profit After Tax (PAT):
 - Year 1: ₹19.50 Lakhs
 - Year 2: ₹30.20 Lakhs
 - Year 3: ₹40.95 Lakhs

- Break-even: Achievable in the first year (~₹30.00 Lakhs revenue)
- Key Ratios: Debt–Equity 0.78:1, DSCR >2, Net Profit Margin ~35%

Risk Assessment & Mitigation:

Risk Type	Mitigation
Technical	Modular technology, staff upskilling
Market	Niche focus, flexible pricing, client relationship management
Financial	Advance billing, conservative cost control
Regulatory	Compliance with data, drone, and statutory regulations
Operational	SOPs, multiple UAV providers, staff cross-training

Social, Economic & Environmental Benefits:

- Support for informed decision-making and sustainable agriculture
- Improved crop productivity and resource efficiency for FPOs and farmers
- Employment generation (direct and indirect)
- Evidence-based watershed planning, land use management, and ecosystem monitoring

Statutory Compliance:

- LLP registration under LLP Act, 2008
- PAN & GST registration
- Compliance with drone & data regulations, labor laws, and municipal requirements

Conclusion & Recommendation:

The proposed project is technically feasible, financially viable, and socially beneficial. With a competent promoter, strong market demand, and sustainable revenue model, the project is suitable for financing under bank, Mudra, or Stand-Up India schemes. Approval is recommended for timely implementation and positive impact in geospatial analytics for agriculture and natural resource management.

2.0 Introduction & Project Background

2.1 Introduction to Geospatial Analytics & Remote Sensing

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