

Terms of Reference (ToR)

Position Title: Information Technology (IT) Expert (2 positions)

Project: Maharashtra Resilience Development Project (MRDP)

Location: Mumbai, Maharashtra

Duration: 3 years (extendable based on performance and project requirements)

I. Background

The Maharashtra Resilience Development Project (MRDP) is a World Bank-assisted initiative of the Government of Maharashtra (GoM) aimed at strengthening flood and climate resilience across the state. The project is structured around five components, of which Component 5 – Implementation Support and Knowledge Management – is responsible for project and knowledge management activities. This includes technical assistance for capacity building; coordination, financial management, procurement, and environmental and social (E&S) risk management; communication, monitoring and evaluation (M&E), and stakeholder engagement; development of a knowledge lighthouse for dissemination of project learning at the state and country levels; and enhancement of governance and institutional coordination, including a clearer institutional framework for data sharing and coordination between disaster, water, and emergency management agencies.

As MRDP moves into implementation, Component 5 requires dedicated in-house digital and quality assurance capacity to support the reliability, integrity, and usability of the project's information systems – including the knowledge lighthouse platform, the M&E/MIS dashboards, and inter-agency data-sharing tools envisaged under the institutional coordination framework. MITRA proposes to onboard IT Experts to fulfil this role.

II. Objective of the Assignment

The objective of the assignment is to provide dedicated information technology support to Component 5 of MRDP, ensuring that all digital tools, dashboards, and data-sharing platforms developed or deployed under the project are functionally sound, data-accurate, secure, and fit for use by project stakeholders, executing agencies, and the public. The IT Experts will support the PMU in translating the knowledge management and institutional-coordination objectives of Component 5 into well-tested, reliable digital systems.

III. Scope of Work

The IT Experts will work under the overall guidance of the Project Director – MRDP and in close coordination with the Knowledge Management, M&E, and institutional coordination workstreams. Specific responsibilities include:

1. Testing and Quality Assurance of Project Digital Platforms

- **Test planning and case design:** Prepare detailed test cases, test plans, and requirement traceability matrices (RTM) for the knowledge lighthouse portal, M&E dashboards, and any project MIS modules developed for Component 5.
- **Functional and regression testing:** Execute functional, regression, UI,

smoke, sanity, and integration testing for each release/build of project digital platforms prior to deployment, to ensure stability and end-to-end usability.

- **API and data-exchange testing:** Validate REST API endpoints (using tools such as Postman) that support data exchange between the knowledge lighthouse, M&E systems, and the institutional data-sharing framework linking disaster, water, and emergency management agencies, including reservoir operation data feeds.
- **Database/data-integrity checks:** Use SQL queries to verify data integrity, consistency, and accuracy across project databases and reporting dashboards, particularly where data is aggregated from multiple agencies.
- **Defect management:** Log, track, and prioritise defects in a bug-tracking system (e.g., Jira), maintain clear reproduction steps and severity/priority classifications, and escalate critical issues with individual status reports to the PMU and development vendors.

2. Support to Knowledge Management and the “Knowledge Lighthouse”

- **Platform quality oversight:** Support MITRA in quality-checking content, links, forms, and workflows on the knowledge lighthouse platform before dissemination at state and country levels.
- **Documentation:** Maintain QA documentation, build-qualification checklists, and version/release notes for each update to the knowledge platform.
- **Stakeholder-facing tools:** Test online forms, feedback mechanisms, and communication tools used for stakeholder engagement to ensure they function correctly across devices and browsers.

3. Support to Institutional Coordination and Governance Systems

- **Institutional data-sharing tools:** Assist in testing and validating any digital tools, interfaces, or dashboards introduced to support the institutional framework for data sharing and coordination among disaster, water, and emergency management agencies.
- **Coordination support:** Provide inputs from a systems/data-quality perspective, to the institutional analysis and feasibility work on a formal flood-risk coordination mechanism across departments.

4. General Project and IT Support

- **Agile coordination:** Participate in Agile/Scrum ceremonies with development vendors/consultants, tracking sprint progress and build qualification against project timelines.
- **Version control and handover:** Maintain version-controlled repositories (e.g., Git) of test artefacts, scripts, and configuration documentation for continuity and audit purposes.
- **Capacity building:** Support basic digital-literacy and tool-usage orientation for PMU staff and partner agencies interacting with project digital platforms.
- Any other IT/QA-related task assigned by the Project Director in furtherance of Component 5 objectives.

IV. Key Deliverables

- Test plans, test case documents, and requirement traceability matrices for

each project digital platform/module.

- Defect logs and status reports (via Jira or equivalent) with resolution tracking.
- API and database validation reports for each major release.
- Build-qualification sign-off notes prior to deployment of any platform update.
- Monthly progress note summarising QA activities, issues identified/resolved, and platform reliability status, for inclusion in Component 5 reporting to the PMU and, as needed, the World Bank.

V. Educational Qualification and Experience

Educational Qualification

- Bachelor's/Master's degree in Computer Applications, Computer Science, IT, or a related field.

Experience

- 0-3 years of relevant experience in QA/testing roles
- The candidate must possess working knowledge of HTML, SQL, and Jira and familiarity with web application platforms
- Familiarity with test automation frameworks is preferable

VI. Reporting and Coordination

The IT Specialist will report to the Project Director at the PMU and will work in close coordination with the TSA team and any external development vendors for project digital platforms.