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MoBEF MIS — Zanzibar Blue Economy Coordination

Ministry of Blue Economy and Fisheries, Zanzibar

4 weeks

First-of-its-kind blue economy coordination platform

15+	< 1 hour	20+ partners
Pre-populated Projects	Report Generation Time	Stakeholder Coverage

The Challenge

The Ministry of Blue Economy and Fisheries had zero consolidated visibility into the 20+ development partners and 40+ NGOs implementing fisheries and blue economy projects across Zanzibar. Coordination relied on fragmented Excel spreadsheets and email chains.

This created duplicative reporting burdens on NGOs, geographic coordination gaps that remained invisible, and an inability to make evidence-based policy decisions. When IFAD supervision missions arrived, generating data packages required approximately 3 days of manual Excel compilation and reformatting.

Our Approach

I designed and built the entire system end-to-end in a 4-week engagement under Finsys Tech Solutions, funded by IFAD's Agriculture and Fisheries Development Programme.

Map-Native Architecture: Built on PostgreSQL with PostGIS as the spatial foundation, making geographic visualization the primary interface. Projects appear on an interactive Leaflet map with district and conservation area overlays — geographic gaps are visible by default.

Adoption-as-Architecture: Pre-populated with 15+ real projects on launch day. Forms limited to fewer than 15 fields. Immediate visual payoff — submit your project data, see it on the map alongside others. These adoption mechanics were encoded in the technical design, not left to training.

Sovereign by Design: Open-source stack (Next.js, PostgreSQL, Docker) deployed on Tanzanian infrastructure. No vendor lock-in. Designed to be managed by the ministry's IT officer, not requiring ongoing international developer support. Four-tier RBAC with standardized data collection forms for partners, projects, and institutions.

Outcomes

First-ever purpose-built blue economy coordination platform globally — no comparable system exists for multi-stakeholder policy coordination with spatial project tracking.

Report generation time reduced from approximately 3 days of manual Excel compilation to under 1 hour via automated IFAD-compatible exports.

Interactive map visualizing project distribution across all Zanzibar districts and conservation areas, making geographic programming gaps immediately visible.

Public-facing dashboard providing transparency to all stakeholders. Role-based access for ministry staff, development partners, and NGOs. Comprehensive training delivered to 4 user segments. System deployed on Tanzanian infrastructure with full data sovereignty.

Technology Stack

Next.js 15 | PostgreSQL / PostGIS | Leaflet | Drizzle ORM | shadcn/ui | Docker