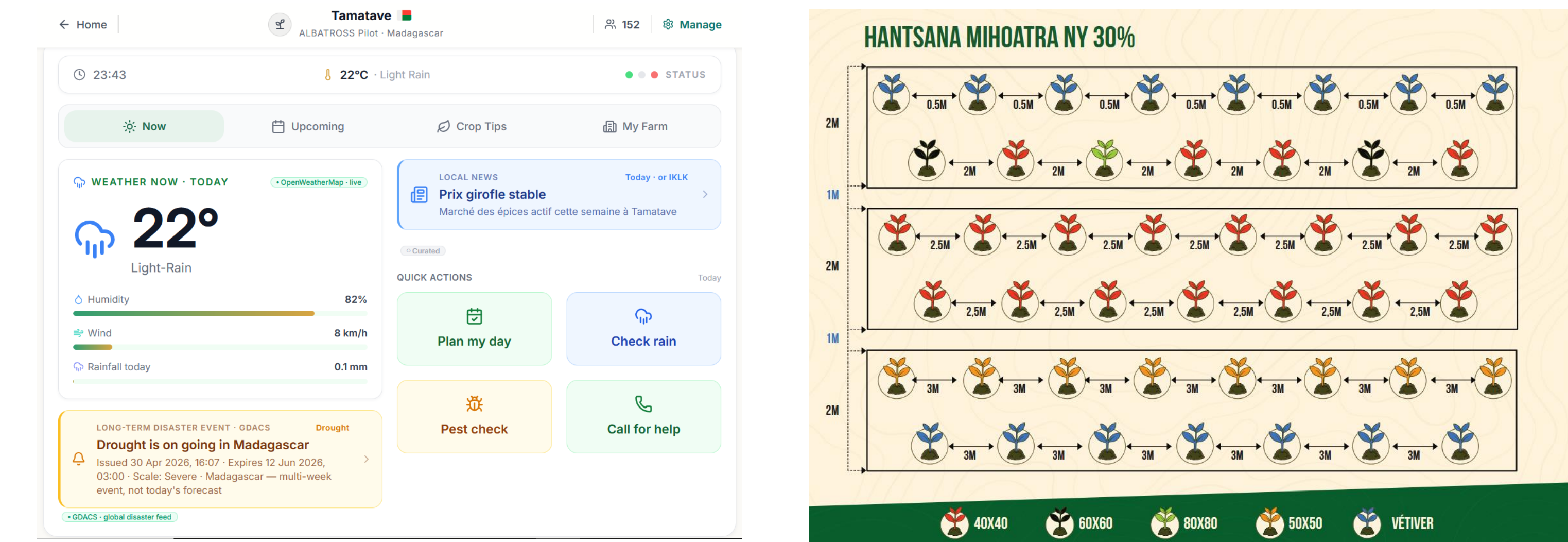
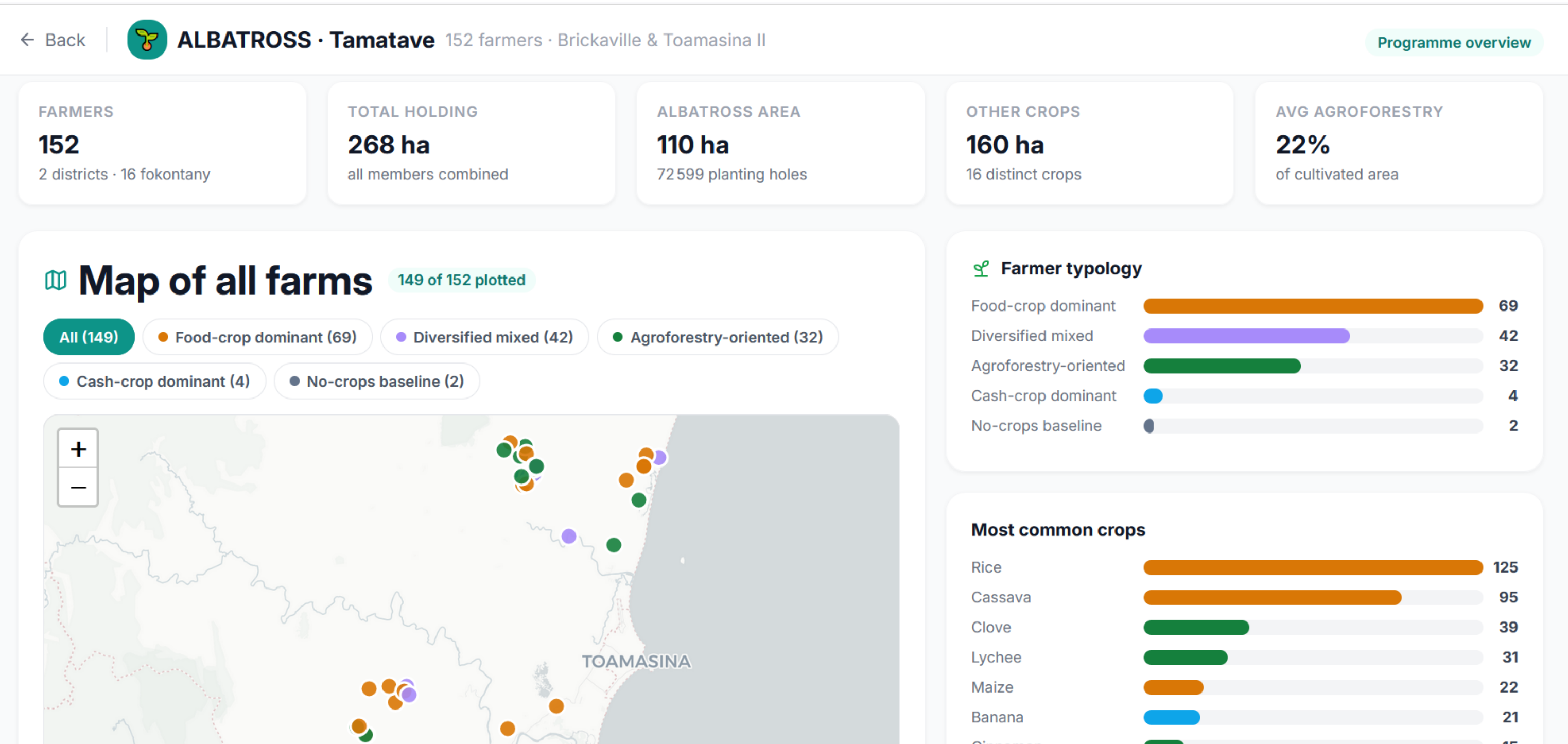




Nature-based solutions

In the Tamatave Hub, nature-based solutions are developed through diversified agroforestry systems co-designed with farmers. These systems combine ecological restoration, production diversification and climate adaptation. They aim to restore degraded soils, reduce erosion and runoff, improve shade and wind protection, enhance biodiversity, and strengthen household resilience to climate and market shocks.

Following Cyclone Gezani, the Hub currently supports the recovery and consolidation of agroforestry systems across 110 ha with 152 farmers. The approach is not limited to tree planting. It combines long-term agroforestry design, farmer training, short-cycle crop support, climate monitoring and participatory learning with farmers, technicians, researchers and local institutions.



Agroforestry system components

The agroforestry systems are designed as diversified, multi-layered models rather than single-species plantations. They combine forest trees, fruit trees, perennial cash crops such as coffee, cacao, clove and cinnamon, and locally useful or medicinal species. This diversity is intended to adapt the systems to local ecological conditions and farmer needs, while linking long-term restoration with shorter-term production opportunities. By reducing dependency on a single crop, these systems aim to strengthen ecological stability, support household needs and contribute to more resilient livelihoods.

Short-cycle crops and early production strategy

During the first two years, before tree canopy closure, the Hub promotes short-cycle and fast-return crops between tree lines. Species such as chili pepper, ginger, pigeon pea, turmeric, passion fruit and watermelon help farmers maintain production and income during the establishment phase of the agroforestry system. Beyond short-term returns, this approach supports soil cover, keeps plots actively managed and strengthens farmer engagement while longer-term agroforestry benefits gradually develop.

Results and status

- 152 farmers engaged
- 110 ha under agroforestry support
- 1 low-cost weather station installed
- 3 Stakeholder Forums completed

Figures reflect post-cyclone engagement after Cyclone Gezani.

Users and applications

Farmers and producer groups

Crop planning, production diversification, soil protection and plot management.

Cooperatives and technicians

Local advisory support, dissemination of climate information and technical follow-up.

Researchers and students

Applied agroforestry research, climate-adaptation learning and field-based monitoring.

Public and territorial actors

Local climate-adaptation planning and support to community resilience.

Communities

Awareness raising, shared learning and adoption of resilient agricultural practices.

Link between NbS and climate services

Stakeholder discussions confirmed that agroforestry must be connected to climate services. Farmers and local actors need practical information on rainfall seasonality, cyclone risks, crop calendars, pest and disease pressure, species choice, pruning, runoff management and plot design. The Hub therefore links field-based nature-based solutions with climate data, low-cost weather monitoring, decision-support tools and participatory learning. This connection is essential to move from generic climate information to locally useful advice for farmers, cooperatives and territorial actors.

Next steps and final outcome

The next steps are to strengthen monitoring of agroforestry systems and local climate conditions, improve crop calendars and actionable climate information, continue stakeholder dialogue through the third Stakeholder Forum and the research-exchange platform, and consolidate locally grounded nature-based solutions for resilient livelihoods and restored landscapes.

Socio-productive baseline: aims to establish a clear initial picture of farmers' existing production systems, cultivated areas, crop diversity and production levels. It provides a reference point to assess, over the long term, how the ALBATROSS project influences agricultural trajectories, climate adaptation, income diversification and farm-level resilience.

Why this matters

The Tamatave Hub shows how nature-based solutions can connect ecological restoration, farmer livelihoods, climate information and participatory governance. By linking agroforestry with locally rooted climate services, the Hub contributes to a more resilient and collaborative adaptation pathway for Madagascar's east coast.



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