AETA2025

The 10th International Conference on Advanced Engineering – Theory and Applications

GSF (Global Smart Future) International Cooperation Platform

GSF Expert Activities & Future Development Strategy

Dec. 11. 2025

Introduction

GSF (Global Smart Future) is an international cooperation platform of TDTU connecting Korea, Vietnam, and ASEAN to promote sustainable development through technology, research collaboration, and community-based pilot projects.

GSF integrates universities, enterprises, farmers' unions, technical teams, and expert networks into a unified ecosystem supporting carbon, energy, water, and agricultural innovation.

Vision & Strategic Role

- GSF builds a **full-cycle model** linking research, pilot implementation, data collection, verification, and commercialization.
- It aims to create regional sustainability through **digital transformation**, smart agriculture, **Web3.0** based trust systems, and AI-driven environmental solutions.
- **Universities serve as research hubs**; communities generate real data; enterprises support industrial applications.

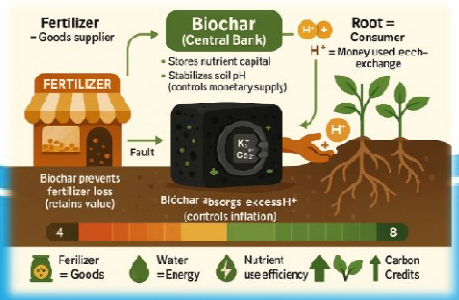
AnyFive's Key Contribution

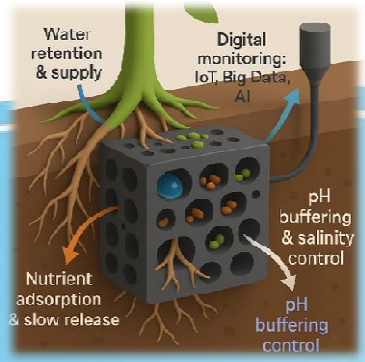
- AnyFive enables GSF to produce internationally certifiable carbon credits.
- It provides intellectual property protection, MRV (Measurement–Reporting–Verification) documentation, data security, and interoperability with global carbon standards.
- This transforms TerraChar, SEMS, and SmartWater field activities into verifiable carbon assets.

Core Technologies of GSF

- **TerraChar** improves soil carbon storage and agricultural productivity, generating Green Carbon data.
- **SEMS** (Smart Energy Management System) uses AI to optimize energy use and quantify carbon reduction.
- **SmartWater** provides real-time IoT environmental and water monitoring for integrated soil–water–carbon management.

Together, these technologies form the **data backbone** for carbon quantification.



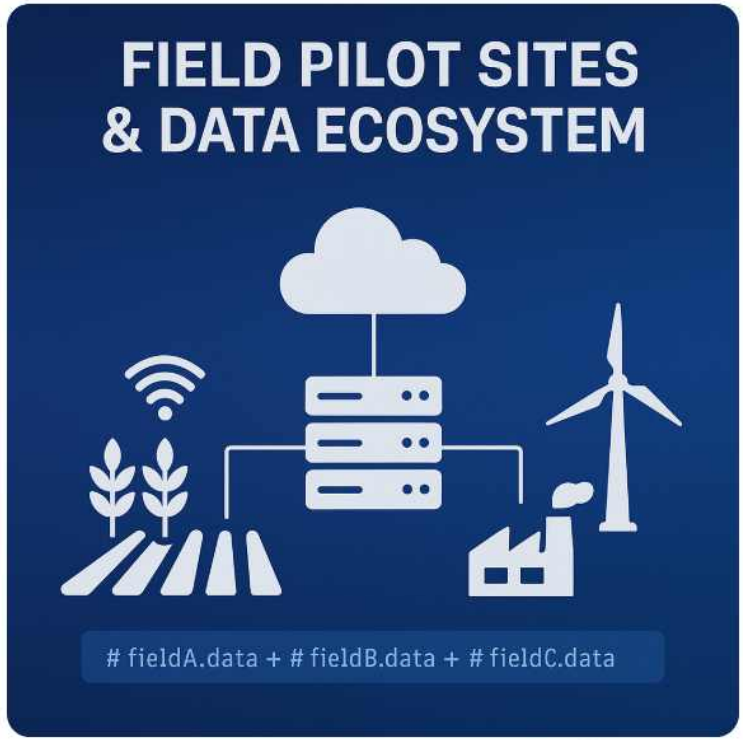


University-Centered Deployment Strategy

- TDTU (Ton Duc Thang University) is the GSF flagship campus hosting TerraChar Lab, SEMS demo center, SmartWater station, Web3.0 blockchain data node, and AnyFive-based MRV/IP station.
- Phase 2 expands to Mekong University to establish a regional carbon data hub and agriculture-based pilot programs.
- Phase 3 expands to Dak Nong Community College focusing on highland TerraChar models and community training.

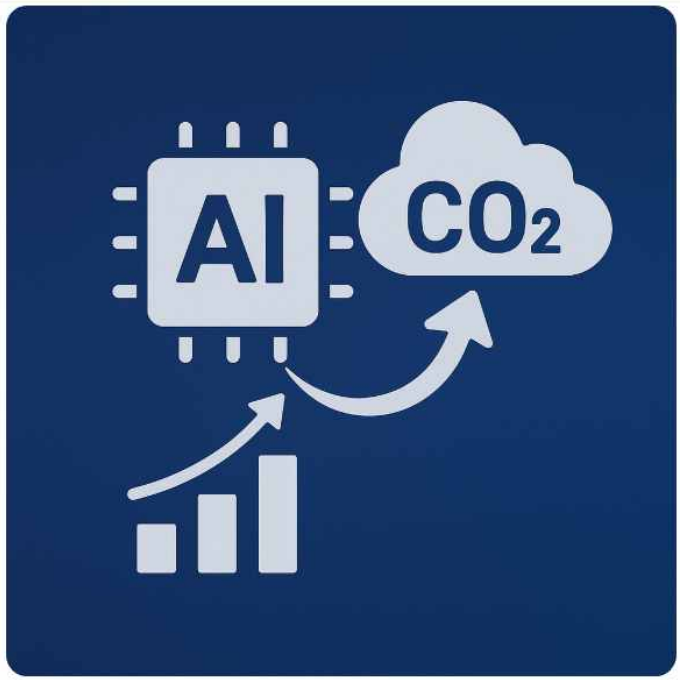
Field Pilot Sites & Data Ecosystem

- Field sites include farmers' unions, cooperatives, enterprises, plantations, factories, and community facilities.
- These sites provide real data: TerraChar (soil carbon), SEMS (energy reduction), SmartWater (environmental parameters).
- Universities validate the data; AI models improve continuously; blockchain ensures transparency and traceability.



AI-Driven Carbon & Energy Solutions

- AI enhances carbon quantification accuracy, predicts energy savings, optimizes crop performance, and automates MRV processes.
- Combined with large-scale field and university data, AI accelerates model refinement and supports scalable carbon methodologies.

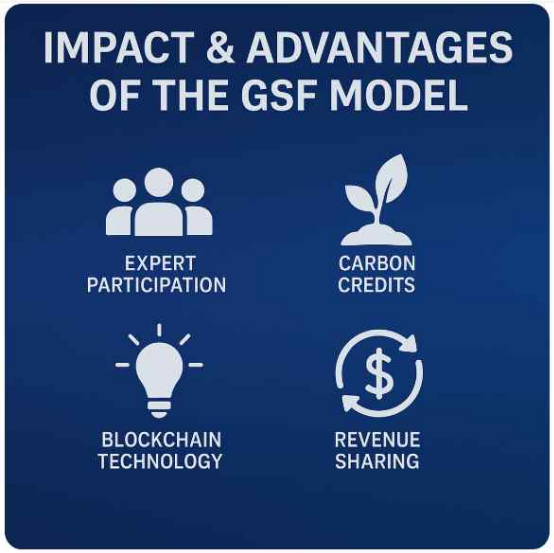


Smart Contract Revenue Model (Example)

- Benefit-sharing is automated via Web3.0 smart contracts to ensure fairness and transparency. (Example distribution)
  - ✓ Farmers/Cooperatives 50–60%
  - ✓ Local Enterprises 15–20%
  - ✓ GSF Platform (Universities, AnyFive, Technical Teams, Experts) up to 10%
  - ✓ Local Community & Government approximately 5%
- This model ensures that field contributors receive the majority of economic benefits.

Impact & Advantages of the GSF Model

- Creates a unified carbon–energy–water data ecosystem.
  Strengthens university–industry–community cooperation.
- Provides a scalable model for Vietnam's carbon economy and ASEAN regional replication.
- Builds trust through blockchain and enhances performance through AI.
- Positions Vietnam as a leader in digital climate technologies.



Future Development Strategy

- **Expand GSF pilot models** internationally across ASEAN through cross-university networks and community-driven carbon programs.
- Advance **Web3.0 governance** for transparent carbon markets.
- Upgrade **AI-based carbon metho**dologies and sector-specific models (agriculture, energy, water).
- Establish long-term partnerships with **governments**, **enterprises**, and global sustainability **institutions**: MOU required

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