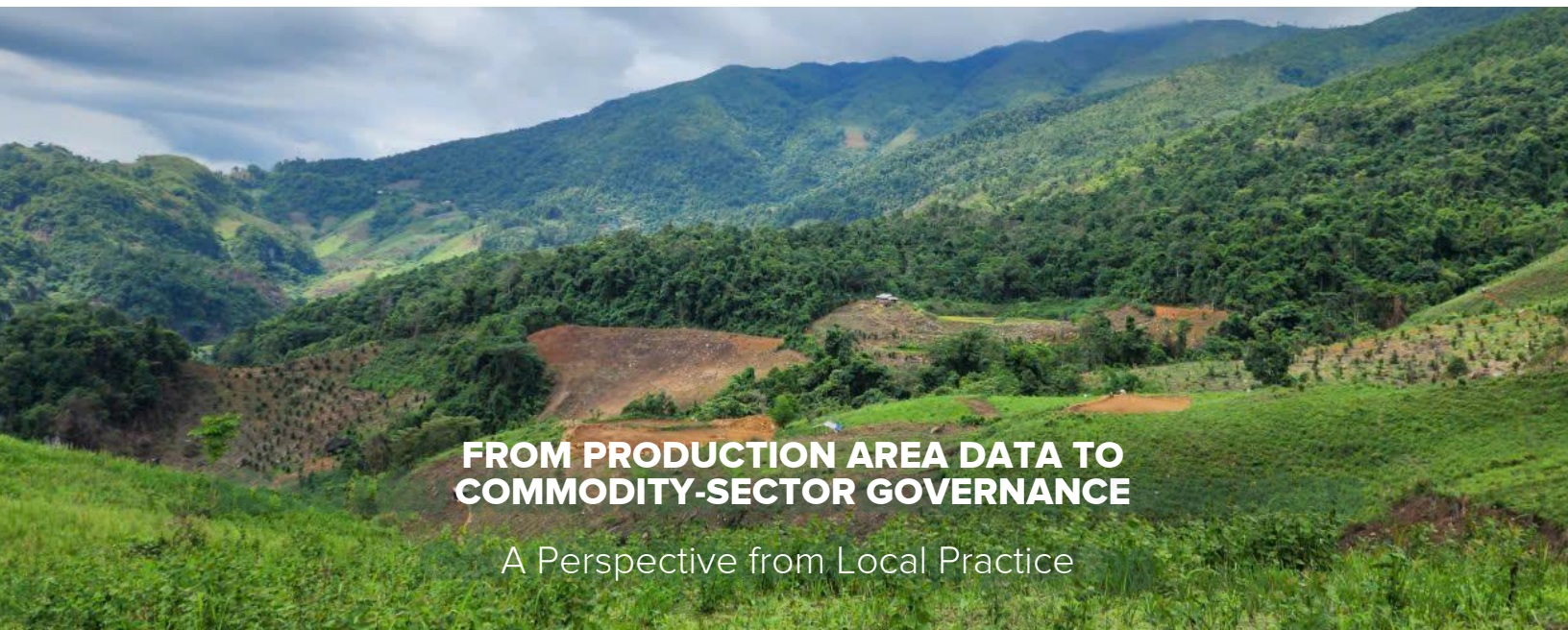




FROM PRODUCTION AREA DATA TO COMMODITY-SECTOR GOVERNANCE

A Perspective from Local Practice

Dr. Pham Tuan Anh - Former Director, Dak Nong Department of Agriculture and Rural Development (former province)

Introduction

In recent years, as requirements for agricultural traceability have become increasingly stringent - particularly with the implementation of the European Union Deforestation Regulation (EUDR) - concepts such as production unit codes and production area databases have received growing attention in state management, value-chain development and the organization of agricultural production. Although they are often mentioned together, the two concepts have very different meanings and roles.

A production unit code is primarily a technical tool for traceability and for meeting the requirements of importing markets. A production area database, by contrast, has a much broader scope and function. It is not merely a repository of production information; it is also a foundation for identifying production spaces, supporting state management, connecting actors across the value chain, and gradually shifting from production management to commodity-sector governance.

Experience from local management shows that the current challenge is not simply to issue codes or collect initial data. More important is how to build a data system that is continuously updated, can reflect changes in actual production, and genuinely supports decision-making.

From this perspective, production area data should be viewed beyond the narrow purposes of traceability or compliance with market technical requirements. This article starts from a simple but important proposition: a production area database is not the end point of traceability. It is the foundation for moving from management based on reports and statistics toward data-driven commodity-sector governance.

The question, therefore, is not only how to build production area data, but also how to turn that data into governance capacity for local authorities, businesses and the commodity sector as a whole.

Part 1. Current Data Landscape and the Need for Commodity-Sector Governance

A common perception today is that the agricultural sector lacks data. In practice, however, the problem is not necessarily a lack of data, but that existing data are fragmented and disconnected. Businesses hold information on sourcing areas and linked supply chains. Cooperatives have data on members and cultivated areas. Development projects retain many survey datasets. Local authorities, meanwhile, manage statistical systems for state management. These sources were created for different purposes, use different standards, and in most cases have not been integrated into a unified system.

Beyond fragmentation, another challenge is that agricultural data must keep pace with the dynamics of production. Crop structures change in response to market signals. Land users change through transfers or production partnerships. Supply chains are also continually adjusted to respond to market demand and importing-country requirements.

Yet many datasets are still created as snapshots and lack mechanisms for regular updating. This creates a common paradox: data remain in the management system, but no longer fully reflect what is actually happening in the field.

The experience of Dak Nong clearly illustrates the dynamic nature of agricultural production. In a short period, durian area expanded rapidly, new specialized production zones emerged, and supply-chain linkages were repeatedly expanded or adjusted in response to market demand. These changes occurred much faster than the update cycles of traditional statistical systems.

This creates an important requirement: a production area database cannot be built once and then maintained like an administrative record. It must be updated regularly so that it accurately reflects production realities and becomes a tool for decision-making.

The greatest value of a production area database is not that it adds another dataset, but that it supports decisions.

Management needs have repeatedly led me to very practical questions:

- *If an order suddenly requires 1,000 tonnes of 4C-certified coffee, can we quickly identify where the supply is, how much is available, and which businesses can meet the order?*
- *At the beginning of the dry season, do we know the exact crop area that needs irrigation so water from existing irrigation works can be allocated appropriately?*
- *At any given time, can we determine what agricultural products are being harvested, where they are being harvested, and in what quantities?*



Photo 1. Coffee harvesting in the Central Highlands. Source: Luong Kim Anh

In practice, most of these questions are very difficult to answer quickly and accurately when management relies only on separate tables and spreadsheets. This points to the need for integrated digital data infrastructure in which production data are organized spatially and updated regularly. With such a system, managers could know at any time what crops are being grown, where they are located, how much area is involved, expected output, who is linked to whom, and what risks are emerging.

When data can answer those questions, a production area database is no longer simply a traceability tool. It becomes data infrastructure for commodity-sector governance.

Through these concrete management challenges, I have increasingly come to see that production unit codes and production area databases are related, but serve different purposes.

Production unit codes usually emerge when markets impose traceability requirements. The need for a database, by contrast, arises from management questions: where is production taking place, at what scale, how is it changing, and what needs to be prepared for future shifts?

Part 2. From Production Unit Codes to a Production Area Database: Lessons from Dak Nong

The 2021-2025 period saw very rapid growth in Dak Nong's system of production unit codes, particularly for durian. This process also raised a number of new questions for management.

When China tightened technical requirements for durian, especially requirements relating to production unit codes, businesses moved quickly to prepare documentation and organize sourcing areas that met export conditions.

From a market perspective, this was a positive driver. The coding system expanded rapidly, creating more export opportunities and advancing traceability.

From the perspective of local management, however, the process also revealed important limitations.

Businesses tend to prioritize areas with concentrated production, good transport access and convenient procurement. Their primary objective is to meet short-term market requirements. As a result, the data generated are largely centered on production areas serving export supply chains, while most of the remaining commodity area stays outside the system.

In many cases, local authorities do not have complete information on how sourcing areas are established, their production scale, or the links between businesses and farmers. This creates a risk of separate 'data fragments' being created for individual supply chains without forming an overall picture for commodity-sector management.

Current practice shows that production unit codes are expanding quickly in several major export commodities. Even so, the coded areas represent only part of the production landscape that exists in reality.

Durian in Lam Dong Province is a clear example. The province currently has 346 production unit codes covering about 13,300 ha, while total durian area has exceeded 44,000 ha. This means that most production area remains outside the production unit coding system.

What matters, however, is not only the number of codes issued. In the area of the former Dak Nong Province, 129 production unit codes and 18 packing-facility codes have been granted for export. At present, however, only 103 production unit codes and 12 packing-facility codes remain active.

These two examples show that production unit codes help identify specific production areas and linked supply chains more clearly. Yet, when viewed against the commodity sector as a whole, they remain only pieces of the picture and are not sufficient to represent the full production space that managers need to monitor.

Production unit codes are an important traceability tool, but they cannot fully represent the commodity sector's entire production space. Even coded areas must be updated and maintained regularly to ensure data accuracy.

Production unit codes are therefore an important starting point, but they cannot replace a database designed for governance.

Management agencies need more than a list of coded areas. They need to see the whole commodity sector: where production is located, how much output is available, the extent of linkages, and what changes are taking place across the production landscape.

Looking back at implementation in Dak Nong, production unit codes tend to expand very quickly when the market sets a specific requirement. The need for a database, however, comes from management questions: where production is occurring, at what scale, how it is changing, and what needs to be prepared for the future.



Photo 2: Coffee harvesting in the Central Highlands. Source: Luong Kim Anh

Part 3. A Bottom-Up Approach: From Data to a Governance System

In the paper "The urgent need to build a production area dataset for agricultural and forestry commodities for management and traceability: A bottom-up approach," Dr. To Xuan Phuc provides a comprehensive analysis of the bottom-up approach to building production area datasets.

Building on the issues already discussed, a local-management perspective can add further insights into how data should be maintained, updated and used after the system has been established.

From a local management perspective, a bottom-up approach should not be understood as assigning the entire responsibility for building data to farmers or cooperatives. Nor should it mean that data can be created solely through reporting requirements or top-down administrative directives.

Practical experience shows that a sustainable data system is always created through a combination of both directions. The State plays an enabling role by setting data standards, ensuring the legal framework, and establishing connected infrastructure. Data, meanwhile, are generated through the everyday production, business and management activities of farmers, cooperatives, enterprises and specialized agencies.

To make this work, existing data sources and technologies should be used effectively. Remote sensing, GIS and cadastral data can provide strong support for identifying production spaces and monitoring land-use change. However, other critical information - such as crop structure, output, pest and disease conditions, and market linkages - still has to be updated from actual production.

The challenge, in practice, is not a lack of technology. The difficult task is connecting fragmented data sources into a system that can support management and decision-making.

Even after the technological and data-integration challenges are addressed, another equally important issue remains: how can data be updated regularly and maintained over the long term?

Experience from developing an agricultural data platform in Dak Nong shows that this depends heavily on the participation of actors across the system. Data are difficult to sustain when participants do not see how the information benefits their own work.

When farmers receive early warnings on weather, pests, diseases or markets; when businesses gain tools for managing sourcing areas and traceability; and when all parties can see value from the system, updating data gradually becomes a practical need rather than merely a management requirement.

A bottom-up approach, therefore, is not simply a method for building a production area dataset. More importantly, it creates the conditions for data to continue being updated, supplemented and adjusted to reflect changes in actual production.

Over time, a production area database is no longer just a collection of information stored in a system. It can become a management-support tool that connects actors in the value chain and enables decisions to be based on information that is closer to real-world conditions.



Photo 3: A coffee farm in the Central Highlands during harvest. Source: Luong Kim Anh

Conclusion

The discussion in this paper is grounded in a reality that has become increasingly clear in agricultural management: a production area database is not merely a traceability tool or a means of meeting market requirements.

Its greater value lies in helping management agencies, businesses and producers gain a clearer view of the production space of the commodity sector in which they participate.

When decision-makers know where production is taking place, at what scale, what risks it faces, and how it is shifting, management decisions can be grounded more firmly in actual conditions rather than relying only on aggregated statistics or experience-based assessments.

From this perspective, production area data are not only about traceability or EUDR compliance. They are also part of the process of strengthening governance capacity in the agricultural sector as production becomes increasingly tied to requirements for transparency, accountability and adaptability to market change.



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