



Food and Agriculture
Organization of the
United Nations



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World Agriculture Watch

METHODOLOGICAL BRIEF

Framework and implementation

Gathering evidence to inform policy
on agricultural transformation



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Introduction

The global community is starting to realize that some of the major Sustainable Development Goals (SDGs) set for 2030, particularly those related to poverty alleviation and the eradication of hunger, may not be reached without immediate, far-reaching, coordinated action. Some 70 percent of global poverty is rural, and many of the rural poor are dependent on agriculture.

Under-nourishment and malnutrition are rife in rural areas. The livelihoods of the world's many smallholders need to be improved, therefore, if the SDG targets on food security, economic development and tackling poverty are to be met.

Agriculture is not just about producing commodities, but about the creation and maintenance of productive employment, the generation of income to ensure that the billions of people who work in the rural economy have a decent life, and the conservation and sustainable use of the natural resources on which rural livelihoods depend. It is also a way of life for family farmers, so access to basic public and collective services has to be a policy priority when it comes to providing decent living and working conditions.

World Agriculture Watch (WAW) proposes an approach and tools to examine, analyse and monitor agricultural transformation around the world, identifying patterns and drivers of change and assessing their impact. It pays particularly close attention to indications of turning points that might denote a meaningful shift from family-based agriculture to commercial and industrial farming.

WAW is an international initiative hosted by the Food and Agriculture Organization of the United Nations (FAO), which relies on a network of national observation posts to interact with stakeholders on the ground, at the local, regional and national levels, and gather data for analysis and interpretation using WAW's methodology. WAW also exchanges information and builds on synergies with other organizations that have common interests, but which use other tools and methodologies to gather data.

The WAW Executive Secretariat coordinates and supports the initiative. Its mission is to facilitate the methodological and knowledge exchange between national WAW observatories. The goal is to pool concepts, methods and tools, and to build and upgrade a core set of indicators that will allow international comparison.

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Rationale

Agriculture is at the heart of the many challenges faced by the world today, from climate change, scarcity of resources and biodiversity to food insecurity and poverty. The challenges are myriad, interconnected and diverse, depending on region, context and specific local traits.

We identify and classify structural transformation in agriculture according to a defined process and map the changes over time in relation to:

- The balance of typical production assets at farm level – land, labour and capital; and
- The absolute and relative values of farm types in a given area.

Inspired by the Sustainable Rural Livelihoods (SRL) framework,¹ this process includes agricultural and non-agricultural activities at farm level.

Rapid structural changes are taking place on farms around the world in terms of the size and tenure of land holdings, the use of hired labour and the increased importance of finance to production and market access, in addition to the effects on farming of top-down market-integration strategies. The structural diversity of agricultural production systems (from small-scale family farming to large-scale enterprises) influences output and, consequently, farms' socioeconomic and environmental impact, as well as the way in which they are likely to evolve in years to come.

Agricultural data are sporadic and scattered by theme and discipline, spanning poverty and income issues, economic efficiency, sectoral impact on the global or common good, food security, large- versus small-scale farming, etc. What's more, current information systems are inadequate for stimulating policy dialogue on the changes underway in agricultural production systems and their social, economic and environmental impacts.

There is an urgent need for an integrated information system that is designed to provide relevant and usable information to stakeholders at all levels – from policymakers to producer organizations and farmers, themselves – on the ways in which agriculture is changing over time, so as to assess the outcomes of their agricultural activities using indicators aligned with the SDGs.

¹ For more information, please see http://publications.iwmi.org/pdf/H_32821.pdf and https://www.researchgate.net/publication/297700616_Diversity_in_family_farming_Theoretical_and_empirical_approaches_to_its_many_forms



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Objectives

WAW's objective is to inform policy dialogue, through national observation units, on the dynamics and relative performance of different types of agriculture, not just in terms of production, but also economic, social and environmental sustainability, from the local to the global level. The dialogue should include comparative analysis and forecast changes in the agricultural landscape.

To achieve this goal, WAW aims to act as a knowledge hub and forum for debate, based on a network of national observations units in representative areas, where significant structural transformation is underway or expected.

To achieve this goal in a sustainable way – which means strengthening institutions and ensuring that countries and relevant stakeholders take ownership – we need to build on existing institutions and work as part of a collaborative process.

We also need an agreed, common conceptual and methodological framework to frame the debate: one that is flexible enough to adapt to the diversity of local situations, but which incorporates and adheres to a minimum standard set of indicators to allow national and international comparisons.

One operational output of WAW's work at national and sub-national level is its identification and categorization of diverse agricultural holdings by “household” and “non-household” criteria, as well as its distinction between “family farming” and “commercial and industrial agriculture”.

Currently, no appropriate or up-to-date data on the distribution of farm holdings by structural type are readily available. We do not know the number of holdings per family-based farm type, nor the number of agricultural “enterprises” in operation globally. This means governments and regional and local authorities lack crucial, basic information when it comes to the design and implementation of policies, making it impossible to tailor them to the diverse needs of the various farm types. WAW aims to help stakeholders address this information gap.

By using WAW methodology, a comparison can be made between family farms and other forms of production, such as commercial or industrial enterprises, where the totality of work is based on waged labour and there are no family ties between farm owners and farm workers.



Conceptual framework

As markets continue to globalize, family farming remains the dominant form of farming around the world. It is currently facing significant challenges and competition from large commercial and industrial agricultural enterprises.

Born of the need to quantify and analyse the number of family farms globally, to identify patterns of development and change, we have come up with an operational and analytical definition of family farming linked to quantitative data on labour use, something that has been lacking to date.



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Family farming refers to one of the forms of organisation of agricultural production and includes holdings that are characterised by organic links between the family and the production unit and by the mobilisation of family labour, excluding permanent employees. These links are reflected in the inclusion of the productive capital in the family assets and in the combination of domestic and market and non-market operating logics in processes to assign family labour and for its remuneration, as well as in choices for the distribution of products between final consumption, intermediate consumption, investments and accumulation.

Source: Bélières et al., 2015, p. 13¹

A number of factors have been driving the proliferation of large commercial and industrial farming, including food crises and the land-grabbing practices of industrial operators, states and investment funds. These farms adopt the conventional agricultural “modernization” models (chemical green-revolution packages with a high level of mechanization), which tend to be based on the exclusive use of hired labour, an increase in farm size due to the drive for economies of scale, and product standardization at the behest of large food companies.

Recognizing the broad and ever-changing diversity of agricultural holdings and the consequences on the wellbeing of rural populations, WAW aims to better inform current policy, planning and governance processes (in particular, those affecting food and nutrition security, socioeconomic development and environmental sustainability). It will do this by helping to develop the capacity of national stakeholders to monitor and incorporate objective evidence on the current situation of farms into their decision-making and forecast the impact of those decisions in terms of agricultural transformation.

We define the performance of agricultural holdings as their ability (under certain policy conditions) to meet the conflicting challenges of sustainable development simultaneously: the economic and social development of farms, environmental issues and the long-term management of natural resources (resource scarcity and fragility).

WAW aims to provide an integrated assessment of the performance of the various structural types of agricultural holding in a given area.

¹ Family Farming Around the World: Definitions, contributions and public policies (<https://www.afd.fr/en/family-farming-around-world-definitions-contributions-and-public-policies>)



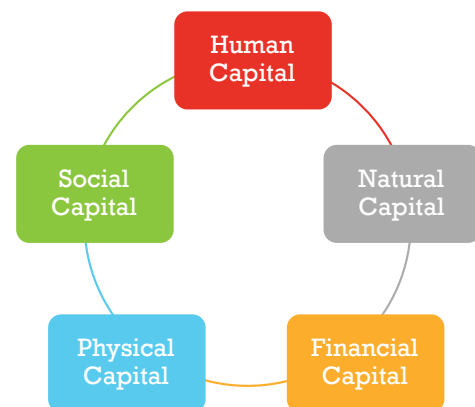
Analysing current assets to frame future investment

Our framework is based on a system of tiered, interrelated scales, ranging from the agricultural holding to the territorial and country levels.

At holding level, to analyse family farms, we use the Sustainable Rural Livelihoods (SRL) approach to classify households and define farm types, as well as conventional economic and management models to categorize commercial and industrial enterprises. These data are then aggregated into categories at territorial, regional and national level. There is a statistical dimension to the classification, too, which can be extrapolated to act as a basis for policy recommendations.

The SRL approach identifies five main categories of asset: natural, physical, human, financial and social. Farmers can mobilize numerous assets to expand or develop their activities, and these assets are not limited to land, the most widely used proxy in farm classification. The SRL approach also includes intangible assets, such as access rights, opportunities, social networks and non-market production – elements that are key to understanding the viability of the most vulnerable farm livelihoods.

The SRL model further takes into account both agricultural and non-agricultural activities, including remittances and non-market goods and services. The latter include agricultural production for own consumption, as well as the gifting and non-monetary exchange of goods, services, productive assets or labour. To characterize the different types of farm, we consider the quantity of each asset and its structural importance to farm livelihood (dependence on non-farm activities, level of food security based on own production, etc).



The SRL approach enables a consistent, systematic approach to farm classification, from basic plot or herd to more complex and integrated production systems involving forestry, aquaculture, plantations, cropping or livestock, for example. Frequently, too, these elements are not a household's only source of income, as members are often engaged in diverse non-farm productive activities. The SRL model takes all of these factors into account, enabling multiple levels of farm categorization. For example, it can identify the most widespread farming or cropping systems used in a particular region.

Looking at family farms through the lens of this comprehensive framework allows us to include dimensions of farm life that are not typically taken into account by the various information systems dealing with agricultural activities. Most important is the diversity of assets used by farmers. As assets are crucial to both investment and policy, our approach is inclusive, as we believe all farmers should have access to tailored investment policies, irrespective of farm size. The combination of various capital assets will help to define farm types and forecast the cumulative impact of annual investment strategies that may lead to changes in one or more of these capital assets.

The territorial system is built on the relationships between stakeholders and around the specific traits of their local economic, social and institutional environments. WAW defines these territories using a combination of administrative delineations (in line with statistics and other data available for a given region) and the broad types of production system in use at ground level.



Options and principles

Our model takes into account historical elements that will help shape our understanding of the situation on the ground. It will link farms to the territory through an assessment of cause, effect and response, particularly with regard to the impact of farming practices on natural resources.

Ideally, the collection of national-level data will be undertaken by a network of local observatories, with aggregation made possible by the common framework. Where there are insufficient local observation units (a common situation, at least initially), we will extrapolate on what usable data are available, so that the area in question can be monitored in the national context. These data may not be statistically representative at the outset, but a comparison of synthesized data can help understand current dynamics. Specific studies can be conducted at local level as needed.

The national environment also shapes the local context (driving forces, pressures, public policies) through both quantitative and qualitative variables.

The typology and reference farm types that emerge at national level will be highly context-specific, though they will be developed in accordance with a common, shared set of principles when it comes to data and indicators:

1. Evaluation will include analysis of past trends, current status and expected future trends.
2. Agricultural holdings will be characterized in terms of their resource base, on- and off-farm activities, and key socioeconomic factors, including the main factors (both on- and offsite) influencing their choice of production and activity system (e.g. policy).
3. A broad initial structural typology of farms based on the use of hired labour will underpin the assessment as an initial and robust basis of differentiation. This approach is aimed at complementing the usual approach, which is based primarily on holding size (land or economic).



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4. Impacts are assessed on a cross-sectoral, multi-criteria basis: social, economic and environmental – the three pillars of sustainability.
5. Changes in agricultural holdings and the impact of these changes over time should be based on a common minimum set of indicators relevant to both local and global analysis, to ensure some degree of robustness and comparability across studies.
6. There will be three tiers of indicator: (1) a core set of indicators common to all situations; (2) a specific set of indicators related to local observatories; and (3) a limited set of experimental indicators. The methodology for calculating the indicators will be updated on a continuous basis through scientific and technical follow-up. Additional research may be necessary to upgrade product quality.
7. National observatories will be set in the context of existing institutions and information systems to avoid duplication. The process will rely on the mutual and reciprocal use of information systems, which will be formally agreed.
8. The aim of the evaluation is to provide relevant information on the multiple effects of changes in agricultural production systems, especially through new investments (assets) adapted to the diverse types of farms.
9. Data integration will be based on jointly designed conceptual models. It will be conducted using a participatory and iterative approach based on diagnosis, stakeholder analysis and observed dynamics. The models will be the result of combined efforts to support:
 - The production of relevant information for action; and
 - Decisions for action.

Models will also facilitate peer comparisons and allow for shifts in scale.

10. The pooling, sharing and dissemination of information will comply with internationally applicable standards, so that monitoring systems are fully interoperable, both within national observation networks and with external networks:
 - With Open Geospatial Consortium (OGC) standards for service provision via the internet;
 - With International Organization for Standardization (ISO), Statistical Data and Metadata exchange (SDMX) and Data Documentation Initiative (DDI) standards for metadata;
 - With ISO and FAO standards for nomenclature and terminology; and
 - Using website and other necessary software that are preferably open source.
11. The WAW initiative includes a capacity-building strategy for stakeholders at all levels.
12. Transparency on data sources and methodological choices is mandatory for all parties.



Farm types and dynamics

The socioeconomic effects of agricultural production depend largely on the production structures and farming patterns involved. As many drivers of change seem to favour the development of agricultural holdings based on hired labour, we plan to focus on researching the way in which the various agricultural sectors are structured at production level, based on the following typology:

- Family farms relying on family labour with limited occasional hired labour (in all their diversity);
- Family farms with permanent hired labour (family business farms); and
- Farm enterprises that exclusively use hired labour (commercial and industrial farms).

The main difference between the latter two types is the level of family control over the farm business; in the case of farm enterprises, control is no longer in family hands. Because of the diversity of the farm enterprise category, we will probably have to include investment criteria (levels and origins). Establishing this typology will be the first step in studying the link between the way production is organized and the impact of such major cropping systems on global issues.

This work will be based on the livelihoods framework: farm structure will be classified according to assets available at farm level, enabling us to narrow the classification to a limited, but still significant number of farm types.

A standardized set of variables and indicators should allow us to assess the situation of the different types of agricultural holding based on various forms of asset at a given point in time and to monitor changes over a specified period. For this, we will need to define intervals and thresholds tailored to the local context.

For the purposes of analysis at local level, indicators will be calculated relative to the regional or national mean, or to other data relevant to both local and national levels. In the absence of a baseline, indicators will be calculated relative to the mean of each type. These analyses will first and foremost have local and national reach. The local stakeholders involved will choose the options they deem most relevant to analysis of their situation and which will inform policy (absolute or relative values, more or less complex indicators). Analyses over time will initially relate to the number of holdings per type and their share of overall agricultural holdings, before moving to the development of comparative variables and indicators.



SDG contributions

Two-thirds of rural dwellers depend on roughly 500 million family farms for their livelihood. They face significant constraints in accessing resources and technology. They require robust investment strategies adapted to their diverse characteristics and situations.

The 2030 Agenda for Sustainable Development¹ presents an integrated vision of development, in which the role of a sustainable family farming model that can feed the growing global population is crucial. Indeed, almost all of the Sustainable Development Goals (SDGs)² have an undisputed agricultural and rural component.

To achieve the 2030 Agenda, political will, policies and development strategies are needed that enable rural communities to access productive resources and financial services, by increasing public and private investment in the family farming sector. A true rural transformation will require coordinated efforts of sufficient scale to reach hundreds of millions of farmers in myriad areas around the globe.

Capturing the diversity of farm types through WAW's approach based on the livelihoods framework will produce results focused on two main components: (1) the structural dimensions and evolution of assets and (2) their performance and impact in relation to sustainable development and achieving the SDGs. With this information, we can work to transform public- and private-sector policy.

Supporting family farms will act as an entry point for many of the interlinked SDGs. A transformation of smallholders would have positive effects in relation to ending extreme poverty and hunger (SDGs 1 and 2), gender equality (SDG 5) – particularly in relation to issues associated with the role of women in agriculture, jobs and growth (SDG 8) – reducing inequalities between rural and urban areas (SDG 10), resilience to climate shocks (SDG 13), and conservation of ecosystems (SDG 15). WAW also relies on and works to strengthen the various partnerships in order to promote synergies between research and academia, farmers' organizations, private- and public-sector stakeholders (SDG 17).

Given their prominent role in food security and sustainable development, investment strategies for smallholder agriculture should be developed with a view to the future transformation of the sector. This statement is fully in line with the Committee on World Food Security's recommendations in relation to investment in smallholder agriculture.

Understanding the relationship between the organization of the agricultural sector and the development of the economy as a whole is key to this. The evolution of one depends on the other and vice versa, so there is a need to understand changes in family farms, their interactions, and the consequences of their choices, so that policies can be put in place to secure their future.

¹ <https://sustainabledevelopment.un.org/post2015/transformingourworld>

² http://www.undp.org/content/dam/undp/library/corporate/brochure/SDGs_Booklet_Web_En.pdf



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Identifying and characterizing the diverse types of farm:

- WAW's conceptual framework is a new, much-needed methodology for comparing agricultural activity in different parts of the world.
- WAW has developed an inclusive, comprehensive approach to family farm typology that encompasses farming activities, household and non-farm activities, as well as family living conditions.



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