



LIBERIA 2024 ANNUAL AGRICULTURE PRODUCTION SURVEY

WOMEN'S EMPOWERMENT AND NUTRITION

EXECUTIVE SUMMARY

LIBERIA INSTITUTE OF STATISTICS
AND GEO-INFORMATION SERVICES



Food and Agriculture Organization
of the United Nations



THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

September- 2025

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1 – Context, Objectives, and Survey Design

1.1 Background and Rationale

The 2024 Liberia Agriculture Production Survey (AAPS) marked a significant milestone in the country's efforts to strengthen its agricultural data systems and integrate social and nutritional dimensions into official statistics. Conducted by the Liberia Institute of Statistics and Geo-Information Services (LISGIS) in collaboration with the Ministry of Agriculture (MoA) and supported technically by the Food and Agriculture Organization of the United Nations (FAO) under the 50x2030 Initiative, the survey aimed to capture a comprehensive picture of agricultural livelihoods and the people behind them.

Recognizing that agricultural production cannot be fully understood without considering who makes decisions and who benefits, the 2024 round included, for the first time, a dedicated Women's Empowerment and Nutrition (WEN) module. This innovation reflects growing evidence that gender equality and nutrition are mutually reinforcing pillars of sustainable development. In Liberia, where women account for a large share of the agricultural workforce but continue to face structural barriers to resources and decision-making, understanding empowerment and its link with dietary outcomes is both a statistical and policy imperative.

The WEN module thus serves a dual purpose: it captures the status of women's empowerment and dietary diversity in agricultural households, and it provides a practical demonstration of how multidimensional gender-nutrition indicators can be embedded within large-scale agricultural surveys at low incremental cost.

1.2 Policy and Development Context

Over the past two decades, Liberia has undertaken substantial reforms to rebuild

institutions, diversify the economy, and promote gender equality following years of conflict and shocks. Agriculture remains the backbone of employment and rural livelihoods, accounting for more than one-third of GDP and supporting the majority of households. Yet persistent gender gaps limit productivity, income generation, and food security. Women farmers often cultivate smaller plots, have less access to extension and credit, and shoulder heavy unpaid care responsibilities. These inequalities reverberate through household welfare, contributing to nutritional deficiencies, particularly among women of reproductive age.

In this context, the WEN module offers policy-relevant evidence to guide the implementation of Liberia's National Gender Policy, the National Agriculture Investment Plan (2021-2025), and commitments to the Sustainable Development Goals (SDG 2 – Zero Hunger and SDG 5 – Gender Equality). By providing disaggregated indicators, it enables policymakers to monitor progress on women's rights, access to productive resources, and nutritional outcomes in tandem—bridging gaps between agricultural and social statistics.

1.3 Objectives of the WEN Module

The module was designed around four interlinked objectives that respond to both national and global data needs:

- **Measure empowerment and nutrition outcomes** among women and men in agricultural households, using standardized indicators comparable across countries participating in the 50x2030 Initiative.
- **Document field and methodological lessons** for integrating gender-sensitive metrics into national survey operations.
- **Promote evidence-based policymaking** by generating indicators that link women's agency with food security and dietary quality.



- **Strengthen national capacity** in data collection, analysis, and dissemination of gender and nutrition statistics, ensuring sustainability within LISGIS and MoA systems.

Together, these objectives transform the AAPS from a purely production-oriented survey into a multidimensional instrument capable of informing inclusive rural-development strategies.

1.4 Survey Coverage and Design

The 2024 AAPS with its WEN module covered women and men aged 18–64 years in agricultural households across all regions of Liberia. Nutrition data were collected exclusively from adult women in the same age group to assess dietary diversity using the globally endorsed Minimum Dietary Diversity for Women (MDD-W) indicator. The design ensured representativeness at the national and regional levels and, where feasible, by rural/urban residence.

Sampling followed a two-stage stratified approach, using enumeration areas drawn from the national census as primary sampling units and households engaged in agriculture as secondary units. Within each selected household, up to three individuals (two women and one man) were randomly chosen for interview, maintaining comparability with other 50×2030 surveys.

Rigorous quality-control procedures, including enumerator training on gender-sensitive interviewing, real-time electronic data checks, and supervision visits, were implemented to ensure accuracy and consistency. Fieldwork took place during the main post-harvest season, when food availability is relatively stable, thereby minimizing seasonal bias in dietary reporting.

1.5 Significance of Integrating Empowerment and Nutrition

Embedding the WEN module in an agricultural survey represents a methodological and conceptual advance. It acknowledges that:

- Empowerment is both an outcome and a driver of development. Women’s ability to make and act on choices influences productivity, income, and nutrition.
- Nutrition is multidimensional. Beyond food availability, it depends on decision-making power, control of resources, and knowledge of healthy diets.
- Data systems must reflect lived realities. Collecting empowerment and dietary indicators alongside crop and livestock data allows a holistic assessment of agricultural performance.

By institutionalizing these linkages, Liberia positions itself among the regional pioneers in aligning agricultural statistics with gender-equality and nutrition agendas.

1.6 Intended Use and Audience

The findings summarized in this executive synthesis are intended to guide a wide range of stakeholders:

- Government ministries and LISGIS, for integrating gender-nutrition insights into policy formulation and monitoring frameworks.
- Development partners and donors, for evidence-based programme design and resource allocation.
- Civil-society and research institutions, for advocacy and deeper analysis of gender dynamics in agriculture; and
- Local communities, for translating empowerment and nutrition findings into practical interventions.

Through this integration, the WEN module strengthens the national evidence base to ensure that women’s roles in agriculture and nutrition



are recognized, measured, and supported by policy.

2 – Conceptual and Methodological Foundations

2.1 The WEN Framework

The Women's Empowerment and Nutrition (WEN) framework brings together two complementary dimensions of human development, agency and nutrition, within the context of agriculture. It builds on global evidence that the ability of women to exercise choice over productive resources, income, and time is closely linked to household dietary quality, children's nutrition, and poverty reduction.

At the core of this framework lies the Women's Empowerment Metric for National Statistical Systems (WEMNS), developed by IFPRI, Oxford University, Emory University, and the World Bank. WEMNS was specifically designed to be integrated into multitopic national surveys like the AAPS, offering a concise but multidimensional measure of agency applicable to both women and men.

WEMNS assesses empowerment through **four domains of agency**, each represented by three equally weighted indicators:

1. **Claiming Rights (Intrinsic Agency)** – Women's internalized beliefs about their right to make decisions and live free from discrimination, measured through attitudes toward livelihood and family-formation choices and rejection of harassment.
2. **Making Choices (Instrumental Agency)** – The ability to act on preferences in daily life, reflected in influence over time use, household spending, and personal health decisions.
3. **Engaging in Communities (Collective Agency)** – Participation in organizations, leadership

roles, and confidence in community engagement.

4. **Mobilizing Resources (Agency-Enabling Resources)** – Access to ICT, financial services and credit, and secure property rights.

Each indicator receives an equal weight of one-twelfth for women (and one-ninth for men, who are not asked the intrinsic-agency questions). Respondents are classified as “**unconstrained**” when they report high influence or agreement with gender-equitable norms.

The **empowerment score** for each individual is the weighted share of indicators in which they are unconstrained.

- Those unconstrained in at least 70 percent of indicators are considered *empowered overall*.
- Those constrained in more than 30 percent are *disempowered*.

From these, two summary measures are computed:

- the **Disempowerment Headcount Ratio (H)** – the share of individuals classified as disempowered; and
- the **Mean Disempowerment Score (A)** – the average intensity of deprivations among the disempowered.
- The product ($H \times A$) is subtracted from 1 to produce the **WEMNS Empowerment Score**.

This composite approach allows empowerment to be interpreted as freedom from multiple, simultaneous constraints rather than achievement in any single area. It provides a rigorous yet intuitive basis for comparison across groups, regions, and sexes.

2.2 Nutrition Indicators

To capture women's dietary quality, the WEN module applied the **Minimum Dietary Diversity for Women (MDD-W)** indicator, endorsed by FAO and



WHO as a global standard for assessing micronutrient adequacy among women of reproductive age.

Each woman was asked to recall all foods and drinks consumed during the previous 24 hours. These were grouped into **10 standard food categories**:

1. Grains, roots and tubers, and plantains.
2. Pulses.
3. Nuts and seeds.
4. Milk and milk products.
5. Meat, poultry, and fish.
6. Eggs.
7. Dark-green leafy vegetables.
8. Other vitamin A-rich fruits and vegetables.
9. Other fruits; and
10. Other vegetables.

Two complementary measures were derived:

- **Food Group Diversity Score (FGDS)**: the count of distinct food groups consumed (0–10);
- **MDD-W Threshold**: met when foods from ≥ 5 groups were eaten in the past 24 hours.

To contextualize diet quality, Liberia's module also measured:

- **Consumption of healthy foods** (fruits, vegetables, pulses, dairy, fish, lean meats).
- **Consumption of other foods** (sweets, fried snacks, sugar-sweetened beverages);
- **Consumption of traditional small-protein foods** (e.g., small fish, insects, or other culturally important sources); and
- **Use of red palm oil**, a key local source of vitamin A but also of saturated fat.

Together, these indicators reveal both nutritional adequacy and emerging diet-transition patterns, providing policymakers with a balanced view of dietary risks and opportunities.

2.3 Integration into the AAPS Design

Embedding the WEN module within the agricultural survey created several methodological advantages:

- **Efficiency**: Using the same sampling frame and field teams minimized costs while expanding analytical potential.
- **Cross-sectoral linkage**: Empowerment and nutrition indicators can be directly related to agricultural production, asset ownership, and income data.
- **Comparability**: The Liberia results align with those from other 50x2030 partner countries (e.g., Sierra Leone and Tanzania), enabling cross-country benchmarking.

The WEN module followed the standard AAPS two-stage stratified sampling design, selecting enumeration areas proportional to size, then households engaged in agriculture. Within each household, up to three respondents (two women and one man) were interviewed using structured questionnaires in local languages.

Enumerators received specialized training on:

- gender-sensitive interviewing and confidentiality.
- proper administration of attitudinal questions on empowerment.
- accurate 24-hour dietary recall; and
- use of computer-assisted personal-interview (CAPI) devices with built-in consistency checks.



2.4 Analytical Approach

The analysis of empowerment and dietary diversity proceeded in two stages.

- **Stage 1 - Indicator Computation:** Each empowerment indicator was dichotomized (unconstrained/constrained). The weighted share of unconstrained indicators yielded individual empowerment scores, from which WEMNS indices were calculated for women and men.

For nutrition, binary and continuous measures (MDD-W and FGDS) were estimated, along with prevalence of healthy, unhealthy, and traditional-protein food consumption.

- **Stage 2 - Association Analysis:** Cross-tabulations and correlation analyses were used to explore how empowerment domains relate to dietary outcomes. Associations were tested across socio-demographic strata (age, education, region, household type), highlighting the multi-layered nature of empowerment–nutrition linkages.

While the results are descriptive rather than causal, they provide robust evidence on patterns of inequality and opportunity.

2.5 Limitations

As with any survey, interpretation of findings requires caution:

- **Scope:** Results refer to adults in agricultural households and cannot be generalized to the non-agricultural population.
- **Cross-sectional design:** Associations do not imply causality.
- **Self-report bias:** Responses on empowerment and diet may be influenced by local norms.

- **Single-day recall:** MDD-W captures short-term intake and may not reflect seasonal variability.

Gender comparison: Men's empowerment excludes the "Claiming Rights" domain, limiting full comparability.

Small cells: Some sub-regional estimates, especially for rare food items such as insects, should be interpreted with care.

Despite these constraints, the WEN module demonstrates the feasibility and value of integrating gender and nutrition data collection into national agricultural surveys, providing a foundation for policy action and longitudinal monitoring.

3 – Key Findings on Women's Empowerment

3.1 Overview

Empowerment among women in Liberia's agricultural households remains limited but shows encouraging signs of progress, particularly in community engagement and financial inclusion.

On average, women scored 0.47 on the WEMNS empowerment index, compared with 0.59 among men. This difference indicates that women remain constrained in nearly half of the empowerment dimensions measured, while men are unconstrained in roughly three out of five.

Women's disempowerment is most evident in intrinsic and instrumental domains—attitudes about their rights and influence over household decisions—while they fare better in collective and resource-based dimensions, such as organizational participation and use of ICT.

The following sections summarize Liberia's performance across the four WEMNS domains: Claiming Rights, Making Choices, Engaging in Communities, and Mobilizing Resources.



3.2 Claiming Rights (Intrinsic Agency)

Intrinsic agency reflects women's internalized beliefs about their freedom to make decisions regarding livelihoods, family formation, and protection from harassment. It captures awareness of rights and rejection of gender-discriminatory norms.

3.2.1 Freedom in Livelihood Choices

Only 35.7% of women in agricultural households fully endorsed women's freedom to choose their own livelihood activities—whether to work for pay, attend school, or purchase property. Support for such freedoms is lowest in the South-Central region (17%) and highest in South Eastern B (47.5%).

Endorsement is strongly correlated with education:

- Just 33.3% of women with no schooling support these freedoms, compared to 67.6% of women with post-secondary education.
- Literate women (40.9%) are substantially more supportive than non-literate women (32.1%).

Younger women (18–29 years) exhibit more progressive attitudes (44%) than older age groups (30% among women aged 55–64). This generational difference signals a gradual cultural shift toward greater acceptance of women's economic autonomy.

3.2.2 Freedom in Family Formation Choices

Nationally, only 35.5% of women believe that women should freely decide when and whom to marry or whether to have children. Endorsement is highest in Montserrado (49%) and South Eastern B (46%), but much lower in South Eastern A (22%) and South Central (19%), reflecting strong regional disparities in gender norms.

As with livelihood freedoms, education is a decisive factor. Endorsement rises from 33% among women with no schooling to 53% among those with senior or post-senior-high education.

Household roles also shape attitudes: female heads (41.5%) and daughters or granddaughters (38.5%) are more supportive than spouses (32.4%), suggesting that women with more autonomy or exposure to education display more gender-equitable beliefs.

3.2.3 Rejection of Subjection to Sexual Harassment

56.3% of women in agricultural households reject all forms of harassment—verbal, physical, or exploitative. However, this implies that nearly half still tolerate at least some level of discriminatory behaviour, highlighting persistent normalization of harassment in some communities.

Regional differences are evident: rejection is highest in South-Central (77.9%) and South Eastern B (67.3%), but lowest in Montserrado (30.3%). Education again plays a decisive role: 71% of women with senior-high education reject harassment compared to only 47% among junior-high graduates.

Together, these indicators reveal that intrinsic empowerment remains uneven. While attitudes toward gender equality are improving among younger and more educated women, traditional norms still limit full endorsement of women's rights—particularly regarding marriage and reproductive autonomy.

3.3 Making Choices (Instrumental Agency)

Instrumental agency captures the extent to which women influence day-to-day decisions about their time, income, and health.

3.3.1 Influence over Time Allocation

Across Liberia, 41.2% of women report having “a lot of influence” over how they allocate their time



among work, domestic duties, and leisure, compared to 49.5% of men. This reflects the persistent “triple burden” faced by women balancing income generation, household chores, and caregiving.

Regional variation is wide:

- South Eastern A stands out (85.8%), where women even surpass men (78.0%) in time autonomy.
- In contrast, South Eastern B (25.3%) and South Central (30.7%) report very limited control.

Influence increases with age and education, reaching 51% among women with post-secondary education compared to 29% among junior-high graduates. Women who head households (47%) or are parents/grandparents (47%) exercise more autonomy than spouses (42%).

3.3.2 Influence in Spending Decisions

Control over financial decisions is a core component of empowerment. Nationally, only 27% of women reported strong influence over household spending, compared with 38% of men.

Women’s financial influence is highest in South Eastern A (40.5%) and North Central (33%), but nearly absent in South Central (9.7%) and South Eastern B (3.7%).

Education amplifies autonomy: women with post-secondary education (50.8%) nearly match men (50.7%) in financial decision-making, while women with junior-high schooling (19.6%) remain heavily constrained.

Female-headed households (37%) demonstrate substantially higher women’s financial influence than male-headed ones (21%), confirming that leadership status translates into decision-making power.

3.3.3 Influence in Own Health Decisions

Health-related autonomy remains limited but improving. 47% of women have full control over decisions about their own healthcare, compared to 59% of men.

Regional disparities mirror broader empowerment patterns:

- South Eastern A (82%) and South Central (62%) show high female autonomy, sometimes exceeding men’s;
- Montserrado (15%) and South Eastern B (14%) show the lowest levels.

Education and age both increase autonomy: older and more educated women are better able to make independent health decisions. Women in female-headed households (48%) enjoy slightly greater health autonomy than those in male-headed households (47%), though the difference is modest.

Overall, the Making Choices domain underscores persistent inequalities in household decision-making, particularly over finances. Nonetheless, the combination of rising education and greater female headship offers a pathway for expanding women’s practical agency.

3.4 Engaging in Communities (Collective Agency)

The high participation of Liberian women in community life is an indication of their social capital and resilience.

3.4.1 Participation in Organizations

Community engagement is nearly universal: 86% of women and 85% of men report participating in at least one community organization—far higher than regional averages across sub-Saharan Africa. Women are particularly active in farmer cooperatives, savings groups, and church or women’s associations.



Regional and socio-demographic variations remain:

- Participation peaks in the North-Western region (97%) and declines in Montserrado (76%), likely reflecting urban time constraints.
- Education encourages engagement: women with post-secondary education (100%) report universal participation.
- Participation is equally strong in rural and urban settings, challenging the assumption that rural women are less socially active.

These results show that collective agency—through peer support, shared learning, and solidarity—represents one of Liberia’s greatest strengths for advancing empowerment.

3.4.2 Leadership in Organizations

While participation is high, leadership remains more limited: only 42% of women hold leadership roles compared to 48% of men. Leadership opportunities are greater in North-Western (46%) and South Central (32%), but scarce in Montserrado (22%).

Education plays a transformative role: 96% of women with post-senior-high education report having led an organization in the previous year, compared with only 37% among those with junior-high schooling. Rural women (45%) are more likely to hold leadership positions than urban women (33%), demonstrating that community-level structures in rural areas provide strong platforms for women’s influence.

3.4.3 Confidence in Community Engagement

Confidence in one’s ability to engage effectively in community life is often an unseen but critical form of empowerment. Here, the gender gap is striking: only 17% of women express confidence in women’s engagement capacity, compared to

32% of men expressing confidence in men’s capacity.

Regional contrasts are extreme. In Montserrado, confidence among women reaches 76%, the highest in the country, while in South Central, it falls to 2%, and in South Eastern B, virtually 0%.

Urban women (28%) express greater confidence than rural women (13%), and education patterns are mixed, suggesting that social norms and community attitudes may play as large a role as formal schooling in shaping women’s confidence.

These findings underscore that participation does not automatically translate into empowerment unless women also feel valued and capable of influencing decisions.

3.5 Mobilizing Resources (Agency-Enabling Resources)

Access to information, finance, and property are essential enablers of agency. In Liberia, progress is evident, but ownership and control gaps persist.

3.5.1 Access to ICT

Use of mobile phones and the internet has expanded rapidly. Over 60% of women in agricultural households report using at least one form of ICT, compared to 70% of men. Access is higher in urban and educated populations, but rural adoption is growing fast due to mobile-money services.

ICT access enhances women’s communication, business opportunities, and awareness—but, as later sections show, it also correlates with higher consumption of unhealthy foods, reflecting exposure to new market influences.

3.5.2 Use of Financial Services and Access to Credit

Financial inclusion has improved markedly. Around 58% of women report using a formal or



informal financial service (savings, mobile money, or insurance), and about one-third have accessed credit in the past year. However, men remain slightly ahead in both indicators.

Use of financial services is highest among women in female-headed households (62%) and those in South Eastern A and North Central, where savings groups and cooperatives are well established.

3.5.3 Secure Property Rights

Only 11% of women report documented property ownership, compared to 13% of men. However, many more women (around 40%) perceive their tenure as secure, even without formal documentation. Perceived and legal security must be strengthened to protect women's rights to agricultural land, housing, and inheritance.

Documented ownership is highest among older, married, and educated women, underscoring the need to formalize women's informal tenure arrangements.

3.6 Composite Empowerment Outcomes

Combining all indicators, the national WEMNS Empowerment Score for women is 0.47, and the disempowerment headcount ratio (H) is 0.53, meaning just under half of women in agricultural households are classified as disempowered. Among those, the mean intensity of disempowerment (A) is 0.46, indicating that disempowered women experience nearly half of the possible deprivations simultaneously.

By contrast, men's empowerment score averages 0.59, with a disempowerment headcount of 0.41.

In summary:

- **Gaps are widest** in intrinsic and instrumental domains (Claiming Rights, Making Choices).
- **Narrower gaps** appear in collective and resource-based domains (Engaging in Communities, Mobilizing Resources).

- **Education, literacy, and female headship** consistently emerge as strong enablers of empowerment.

The results demonstrate that Liberia's empowerment landscape is characterized by diversity, with progress in social participation and resource access, but hampered by persistent inequalities in rights awareness and household decision making.

4 – Women's Dietary Diversity and Nutrition Outcomes

4.1 Overview of Women's Diet Quality

Liberian women's diets show moderate diversity but persistent imbalances between staple consumption and nutrient-dense foods. Nationally, 54 percent of women aged 18–64 years met the Minimum Dietary Diversity for Women (MDD-W) threshold—meaning they consumed foods from at least five of ten food groups in the previous 24 hours. This figure positions Liberia slightly above the sub-Saharan African average (~45 %), but below the level required to ensure adequate micronutrient intake for all women of reproductive age.

The average Food Group Diversity Score (FGDS) across all respondents was 4.6, suggesting that nearly half of adult women fall short of the minimum standard.

Rural women recorded slightly lower diversity (4.4) than urban women (4.9), reflecting differential access to markets and perishable foods.

Women's diets remain dominated by staples and fats, while protein and micronutrient-rich foods are consumed irregularly.

These patterns mirror the country's broader food-system characteristics: reliance on cassava, rice, and imported cereals; limited cold-chain



infrastructure; and variable access to animal-source foods outside coastal areas.

4.2 Consumption by Major Food Group

The WEN module provides a detailed picture of food-group consumption among adult women.

4.2.1 Staples (Grains, Roots, Tubers, and Plantains)

Virtually all women ($\approx 94\%$) consumed staples within the recall period. These foods form the caloric foundation of the Liberian diet but contribute limited micronutrients when eaten without fortification or accompaniment.

4.2.2 Pulses (Beans, Peas, Lentils)

Only 17 % of women consumed pulses, a critical plant-based protein source. Their low consumption reflects seasonal scarcity, high prices of imported legumes, and limited local production. Promoting pulse cultivation and consumption could substantially enhance diet quality.

4.2.3 Nuts and Seeds

Around 18 % of women consumed nuts or seeds, often groundnuts and sesame, which provide essential fatty acids. Usage is highest in northern counties where groundnut paste forms part of traditional sauces.

4.2.4 Milk and Dairy Products

Consumption of dairy products is extremely low ($\approx 15\%$). Limited livestock ownership, cold-chain gaps, and preferences for imported condensed milk or milk powder constrain intake of fresh dairy foods.

4.2.5 Meat, Poultry, and Fish

Protein intake from animal sources is more common: 89 % of women ate meat, poultry, or

fish in the 24 hours preceding the survey. However, frequency and portion sizes vary widely. Coastal regions benefit from fish availability, while inland counties rely on small livestock or dried fish.

4.2.6 Eggs

Only 12 % of women consumed eggs—one of the most nutrient-dense yet affordable foods—highlighting an opportunity for behaviour-change interventions and backyard poultry promotion.

4.2.7 Dark-Green Leafy Vegetables and Vitamin A-Rich Produce

56 % of women consumed dark-green leafy vegetables, while 71 % ate other vitamin A-rich fruits and vegetables. These rates are encouraging given Liberia's agro-ecological potential but still suggest room for scaling kitchen gardens and nutrition-sensitive agriculture.

4.2.8 Red Palm Oil

Consumption of red palm oil is nearly ubiquitous (78 % of women). It remains an important source of vitamin A but also contributes substantially to dietary fat intake. Balancing its benefits and risks is key for public-health messaging.

4.2.9 Other Foods and Beverages

Consumption of other foods, high in sugar, salt, or fat, is common and increasing, particularly among younger and more empowered women:

- 30 % consumed sweets,
- 25 % consumed savoury snacks, and
- 39 % drank sugar-sweetened beverages in the past 24 hours.

These trends point to an emerging nutrition transition, with implications for overweight and non-communicable-disease prevention.



4.2.10 Insects and Other Small-Protein Foods

Only 6 % of women reported eating insects or other small traditional proteins, mainly in less-empowered rural households. Although low, such foods remain culturally significant and environmentally sustainable protein sources.

4.3 Regional and Socio-Demographic Patterns

Dietary diversity varies substantially across Liberia's six agro-ecological regions:

	% Women Meeting MDD-W	Characteristics
North Central	~58 %	High consumption of pulses and leafy vegetables.
North Western	~53 %	Strong fish intake; limited dairy.
South Eastern A	~50 %	Highest red-palm-oil use; moderate protein diversity.
South Eastern B	~47 %	Low fruit intake; moderate staple diversity.
South Central	~55 %	Coastal fish availability; high unhealthy-food consumption.
Montserrado (Urban)	~61 %	Most diverse diets but also highest consumption of processed foods.

Education and household headship are powerful determinants:

- Women with post-secondary education achieved over 70 % MDD-W compliance, compared with ≈ 45 % among those with no schooling.
- Women in female-headed households are more likely to meet MDD-W than those in male-headed ones, reflecting stronger control over food choices.

Age also matters, dietary diversity peaks among women aged 30–44 years—the group most active in both income generation and caregiving.

The widespread intake of processed snacks and sugary beverages signals a shift toward energy-dense, nutrient-poor diets, particularly in urban and peri-urban areas. This pattern mirrors economic growth and increased access to markets but also raises public-health concerns.

5 – Interlinkages Between Empowerment and Nutrition

Women's empowerment and nutrition are closely connected. Results show that when women have greater control over resources and decisions, they tend to eat more diverse and nutritious diets. Empowered women can influence how household income is spent, decide what foods are purchased, and access markets—all key factors shaping dietary quality.

The Minimum Dietary Diversity for Women (MDD-W) is a key indicator of micronutrient adequacy. In Liberia, women who met this threshold—consuming at least five food groups—had a mean empowerment score of 0.50, compared with 0.45 among those who did not. This statistically significant difference confirms that empowerment improves diet diversity and underscores the importance of agency in achieving adequate nutrition.

5.1. Empowerment domains and dietary outcomes

The link between empowerment and diet varies across domains. The mobilizing resources domain, covering access to credit, financial services, and information technology, shows the strongest correlation to dietary diversity. Women who can borrow money, save, or use mobile phones are more likely to buy and prepare a variety of foods, especially perishable and



nutrient-rich items such as vegetables, meat, and milk.

Engaging in communities domain also matters. Women who participate in or lead community organizations have more diverse diets, suggesting that collective action builds confidence and spreads knowledge about food, agriculture, and nutrition.

By contrast, the claiming rights and making choices domains show weaker or mixed links. While women who support freedom in livelihood or family decisions tend to have better diets, everyday control over time, spending, or health does not always translate directly into improved nutrition.

5.2. How Empowerment Shapes Diets

Across empowerment levels, staple foods, such as rice, cassava, and plantains, remain nearly universal. But nutrient-rich foods rise steadily with empowerment: consumption of nuts and seeds, dark-green leafy vegetables, vitamin A-rich fruits and vegetables, and animal-source foods all increase. For example, women with high empowerment are far more likely to eat meat or fish (93%) than those with low empowerment (87%).

Some foods, like milk and eggs, show non-linear patterns—rising from low to medium empowerment and then dipping slightly—likely reflecting affordability or local preferences.

Empowerment also increases access to processed and convenience foods. Fried and salty snacks rise from 20% among the least empowered to nearly 30% among the most empowered, and sweet foods from 27% to 37%. This shows that empowerment expands choice, but not always in healthier directions.

5.3. Cultural and Traditional Foods

Consumption of red palm oil and insects or small protein foods remains high and largely unchanged across empowerment levels. These are shaped by tradition and geography more than by agency, showing that empowerment interacts with—but does not replace—cultural food patterns.

6- Implications for Liberia's development agenda

The results of the WEN module carry important implications for Liberia's efforts to achieve its National Food and Nutrition Security Policy, the Arrest Agenda for Inclusive Development (AAID), and international commitments such as the Sustainable Development Goals (SDGs). Without closing gender gaps in empowerment and resource ownership, progress in nutrition and food security will remain limited. Furthermore, Liberia must address the rising consumption of unhealthy foods, which, if left unchecked, could exacerbate the burden of non-communicable diseases and strain the country's health system.

In conclusion, the WEN survey confirms that empowering women in Liberia is both a matter of equity and a pathway to improved nutrition and food security. However, empowerment must be coupled with supportive food systems, nutrition-sensitive agriculture, and education to ensure that women's increased agency translates into healthier diets and better outcomes for households and communities. Only then can Liberia harness the full potential of women's empowerment to drive sustainable development

7- Policy recommendations

Based on the findings of the WEN module, the following policy and programmatic recommendations, aimed at strengthening women's empowerment and improving nutritional outcomes are proposed to



government, development partners, and civil society:

- Strengthen women's access to resources: Expand access to financial services, credit, and documented property rights, which strongly correlate with improved dietary diversity.
- Promote women's participation and leadership: Support women's involvement in organizations and leadership positions to enhance collective empowerment and nutrition outcomes.
- Integrate empowerment with nutrition education: Pair empowerment programs with targeted campaigns promoting healthy diets to reduce rising consumption of unhealthy foods.
- Improve food system availability: Increase production and affordability of nutrient-rich foods such as pulses, dairy, eggs, and fruits to close dietary gaps.
- Address cultural and household decision-making barriers: Design interventions that foster equitable influence for women in health and spending decisions.
- Harness social norms change: Promote attitudes supporting women's freedom in livelihood and family formation to complement structural empowerment.
- Monitor nutrition transition risks: Track both healthy and unhealthy food consumption to ensure empowerment policies deliver balanced dietary outcomes.

8- Conclusion

The 2024 WEN module in Liberia demonstrates that collecting and analysing gender and nutrition data within agricultural surveys is not only feasible but transformative. The evidence shows that **empowered women are more likely to achieve dietary adequacy**, to lead organizations, and to participate in economic life—yet they also

navigate complex choices in an evolving food landscape.

To capitalize on these insights, empowerment must be treated as a **central pillar of agricultural and nutrition policy**, not a peripheral concern. Strengthening women's agency—through property rights, financial inclusion, education, and voice in decision-making—offers one of the most powerful and sustainable routes to achieving food security and gender equality in Liberia.

The WEN experience provides a replicable model for other countries seeking to align agricultural statistics with social transformation. By institutionalizing these innovations, Liberia stands poised to lead in demonstrating how data can drive inclusive, equitable, and nutritionally secure rural development.

