

Report on
**Youth in
Agrifood Systems
Performance Index (YAPI)**

Pilot Countries



2026



Table of Contents

Acronyms and Abbreviations	5
Foreword	6
Executive Summary	7
1. Introduction	8
1.1 Background	8
1.2 Rationale for the Youth in Agrifood Systems Performance Index (YAPI)	8
1.3 YAPI Development Process	9
1.4 The YAPI Framework and Domains	9
2. Methodology	11
2.1 Selection of Pilot Countries and Processes	11
2.2 The YAPI Framework	12
2.3 Weighting Methodology	12
3. Pilot Country Results	15
3.1 Overview of Participating Countries	15
3.2 Comparative Analysis of YAPI Scores	17
3.3 Typology of the Performance by Country	21
3.4 Domain-Specific Insights (Missing Data Rates)	21
3.5 Comparison of Actual Missing Data and Zero in Scores by Domain	22
3.6 Country Level Strengths and Weaknesses	23
3.7 Summary of Results	24
4. Lessons Learned	25
4.1 Challenges in Institutional Coordination	25
4.2 Gaps in Statistical Capacity	25
4.3 Data Entry Inconsistencies	26
4.4 Variation in Validation Rigor	26
4.5 Platform Usability Insights	26
5. Recommendations	28
Appendix	30
Annex 1: Country Scores by Domain and Weighting Approaches	30
Annex 2: Summary of All YAPI Results	34
Annex 3: YAPI Domains, Indicators, and Data Parameters	51
Annex 4: Missing Data Rates by Domain	54
Annex 5: Weighting Methodology and Normalization	57
Annex 6: Photo Documentation of YAPI Pilot of Events	60
References	62

List of Figures

Figure 1: Domains of the Youth in Agrifood Systems Performance index (YAPI)

Figure 2: Youth population 15-34 years (in million)

Figure 3: YAPI score by weighting method

Figure 4: Domain 1 Score at Country Level (equal and expert weighting)

Figure 5: Domain 2 Score at Country Level (equal and expert weighting)

Figure 6: Domain 3 Score at Country Level (equal and expert weighting)

Figure 7: Domain 4 Score at Country Level (equal and expert weighting)

Figure 8: Domain 5 Score at Country Level (equal and expert weighting)

Figure 9: Missing data rate for domain 1 (%)

Figure 10: Missing data rate for domain 2 (%)

Figure 11: Missing data rate for domain 3 (%)

Figure 12: Missing data rate for domain 4 (%)

Figure 13: Missing data rate for domain 5 (%)

List of Tables

Table 1: List of YAPI Pilot Countries

Table 1B: Movement of Countries Through the YAPI Pilot Process

Table 2: Example of weighting “Youth access to land and secure rights” from five experts

Table 3: Summary of Selected Weighting Methods

Table 4a: Representativeness of the YAPI Pilot Sample Relative to all 55 AU Member States

Table 4b: List of the 11 pilot countries

Table 5: Typology of the Performance by Country

Table 6: Comparison between actual missing data and Zero in Scores by Domain

Table 7: Data Completeness and Score Confidence Classification by Country and Domain



Acronyms and Abbreviations

AAYS	African Agribusiness Youth Strategy
ACBF	African Capacity Building Foundation
ACR	Africa Capacity Report
AFS	Agrifood System
AgEMP+	Agrifood System Employment
AgGDP+	Agrifood System GDP
AHP	Analytic Hierarchy Processes
AU	African Union
AUC	AU Commission
AUDA-NEPAD	African Union Development Agency- New Partnership for Africa's Development
BAL	Budget Allocation
BOD	Benefit of the Doubt Approach
BR	CAADP Biennial Review
CAADP	Comprehensive Africa Agriculture Development Programme
COMESA	Common Market for Eastern and Southern Africa
CFA	Confirmatory Factor Analysis
DEA	Data Envelopment Analysis
EAC	East African Community
ECCAS	Economic Community of Central African States
ECOWAS	Economic Community of West African States
DMC	Data Minimum Coverage
EFA	Exploratory Factor Analysis
FA	Factor Analysis
IFPRI	International Food Policy Research Institute
IGAD	Intergovernmental Authority on Development
MCA	Multicriteria Analysis
ML	Maximum Likelihood
NSO	National Statistics Office
NAYS	National Agribusiness Youth Strategies
OECD	Organisation for Economic Co-operation and Development
PC	Principal Components
PCA	Principal Components Analysis
PO	Public Opinion
RA	Regression Analysis
REC	Regional Economic Community
SADC	Southern African Development Community
SME	Small and Medium Enterprise
STC	The AUC Specialized Technical Committee on Agriculture, Rural Development, Water and Environment
TVET	Technical and Vocational Education and Training
UCM	Unobserved Components Models
UMA	Arab Maghreb Union (Union du Maghreb Arabe)
WIPO	World Intellectual Property Organization
YAPI	Youth in Agrifood Systems Performance Index





Foreword

The youth population constitutes the greatest asset of the continent of Africa. As the world's youngest population, Africa stands at a defining moment where the energy, creativity, and entrepreneurial spirit of young Africans are waiting to be harnessed to transform the agrifood systems and build a more prosperous, food-secure, resilient and sustainable continent.

Every year, millions of young Africans enter the labour market with aspirations to build meaningful livelihoods, create businesses, and contribute to Africa's development. The agrifood sector offers one of the continent's greatest opportunities to create decent jobs at scale, unlock new enterprises, and empower a generation of young innovators across the entire value chains- from production and processing to technology, logistics, finance, and markets. However, realizing this opportunity requires collective commitment, targeted investments, and an enabling environment that allows young people to access the skills, resources, and opportunities they need to succeed.

The African Union is committed to ensuring that young people are at the centre of Africa's agrifood systems transformation. The Comprehensive Africa Agriculture Development Programme (CAADP) Kampala Declaration (2026–2035) places youth empowerment as a critical priority, with a commitment to empower at least 30 percent of youth across agrifood value chains by 2035. Achieving this ambition requires more than policy commitments; it requires coordinated action, strategic investments, and effective mechanisms to measure progress, identify gaps, and ensure accountability.

To achieve these ambitions, stakeholders must be able to measure progress, understand what works, identify challenges, and strengthen collective actions. What gets measured gets improved, and what is monitored can be transformed. Reliable data and evidence are therefore essential to ensuring that commitments translate into tangible results for Africa's young women and men.

The Youth in Agrifood Systems Performance Index (YAPI), comprises five domains (Education, skills & technology; Productive resources and services; Economic opportunities; Policy engagement and governance; and Sustainability and resilience to shocks), and has been developed as a groundbreaking continental tool to track progress, generate evidence, and strengthen accountability for youth empowerment in agrifood systems. The YAPI will enable African Union

Member States, Regional Economic Communities, partners, and other stakeholders to better understand the enabling conditions required to create jobs, nurture youth-led enterprises, and accelerate inclusive agrifood systems transformation.

As we implement the CAADP Kampala Declaration, YAPI will serve as a compass guiding our collective efforts to ensure that Africa's youths are equipped with the opportunities, resources, and platforms required to shape the future of agrifood systems. It will help us move from ambition to action, from commitments to measurable impact, and from potential to prosperity.

Under the leadership of the African Union Commission in collaboration with AUDA-NEPAD, the development of YAPI benefited from the valuable partnership of AGRA and the Mastercard Foundation, in collaboration with IFPRI and other continental stakeholders, through the Youth Entrepreneurship for the Future of Food and Agriculture (YEFFA) program. Their contribution has supported the establishment of YAPI as an AUC-led continental instrument for strengthening the intentional inclusion of youth, evidence-based decision-making, and accountability in the implementation of the CAADP Kampala Declaration.

I commend all African Union Member States, Regional Economic Communities, partners, youth organizations, and stakeholders who have contributed to the development of this important initiative. Through sustained collective action, strategic investments, and shared commitment to youth empowerment, we can build an Africa where young people could access decent employment, establish successful enterprises, and play a leading role in achieving resilient, inclusive, and sustainable agrifood systems.

H.E. Moses Vilakati
Commissioner
Agriculture, Rural Development, Blue Economy and
Sustainable Environment
African Union Commission
Addis Ababa, Ethiopia





Executive Summary

Africa's agrifood systems remain central to inclusive growth, employment creation, and economic transformation. With one of the youngest populations in the world, empowering youth within agrifood value chains is both a demographic necessity and a strategic priority. Under the Kampala CAADP Strategy and Action Plan (2026–2035), African Union Member States committed to empowering at least 30 percent of youth in agrifood value chains by 2035. The Youth in Agrifood Systems Performance Index (YAPI) was developed to monitor progress toward this commitment through a comprehensive and systems-based framework. Developed by the African Union Commission in collaboration with the African Union Development Agency-New Partnership for Africa's Development (AUDA-NEPAD), Regional Economic Communities, and AGRA, YAPI is designed to address the limitations of the previous CAADP indicator, which focused narrowly on counting youth jobs. Instead, it measures youth engagement across five interconnected domains: Education, Skills and Technology; Productive Resources and Services; Economic Opportunities; Policy Engagement and Governance; and Sustainability and Resilience to Shocks.

The pilot phase, covering eleven Member States across all five regions of the continent and representing nearly 196 million youth, provides an initial cross-country synthesis. These findings are indicative of patterns within the pilot sample but should not be read as a full assessment of all 55 AU Member States; that will require the rollout of YAPI across the broader membership. The aggregate score of 1.55 out of 5 (31 percent of the maximum possible score) indicates that, while important foundations are being laid, structural constraints continue to limit transformative youth participation in agrifood systems. Overall country scores are presented on a 0-5 scale, where 5 represents the maximum possible performance. Because scores are normalized relative to the observed range within the 11 pilot countries, they will shift as additional countries are incorporated.

Policy Engagement and Governance domain records the largest aggregate contribution to the overall score, reflecting progress in establishing youth-responsive frameworks and participation mechanisms. Uganda and Egypt lead under equal weighting, while Eswatini and Malawi also rank highly under expert weighting; Cameroon and Côte d'Ivoire remain at the lower end. These patterns should be interpreted alongside data-completeness information. Morocco and Tunisia record relatively strong policy-engagement scores, whereas Egypt's profile is more mixed. Economic Opportunities and Sustainability and Resilience record the smallest aggregate contributions, underscoring persistent challenges in generating decent, productive

employment and equipping youth to withstand climate, market, and systemic shocks. The near absence of institutionalized mentorship systems and the limited uptake of climate-smart practices and insurance highlight critical gaps in long-term capacity building and resilience.

Access to advisory services and finance contributes positively in several countries, yet structural barriers such as insecure land rights, limited irrigation, weak infrastructure, and uneven access to productive assets continue to constrain youth productivity and business growth. The findings demonstrate that youth empowerment cannot be achieved through employment creation alone; it requires coordinated investments across skills development, finance, governance, infrastructure, and resilience systems.

The pilot also revealed significant data gaps in several domains, particularly in economic opportunity and resilience indicators. Strengthening national statistical systems and harmonizing youth-disaggregated agrifood data will be essential for scaling YAPI to all 55 AU Member States and for ensuring credible continental monitoring. It is important to note that data availability varies considerably across domains and countries. Domains 3 (Economic Opportunities), 4 (Policy Engagement and Governance), and 5 (Sustainability and Resilience) record the highest rates of missing data in several pilot countries. Where data gaps are substantial, domain scores should be interpreted with caution, as low values may partly reflect incomplete reporting rather than confirmed poor performance.

The Youth in Agrifood Systems Performance Index (YAPI) provides a promising foundation for integrating youth empowerment into the CAADP Biennial Review process and for guiding evidence-based policy action. Achieving the 2035 target will require sustained political commitment, improved implementation capacity, strengthened data systems, and targeted investment to ensure that Africa's youth can participate meaningfully and sustainably in agrifood systems transformation. The index and accompanying indicators also have the potential to serve as diagnostic tools, identifying what information and enabling conditions are available, and as planning and decision-support tools that help countries determine what should be done to improve outcomes, mutual accountability, and learning.



01 Introduction

1.1 Background

Africa's agrifood systems hold immense potential to drive economic growth and job creation, particularly for its rapidly growing youth population. However, despite various policy commitments and interventions, many African countries face persistent challenges in generating sufficient and high-quality work opportunities for young people in agriculture and agribusiness. A key limitation has been the lack of credible, consistent, and comparable data on youth participation in agrifood systems, making it difficult to track progress, assess impact, and inform targeted policies.

African governments and Heads of State, through the African Union, have recognized agrifood systems (AFS), encompassing primary agricultural production, processing, agribusiness, and value-chain activities, as central to economic growth and transformation. This transformative potential depends primarily on productivity-driven growth and value-chain development; extensive-margin agricultural expansion alone is unlikely to drive rapid economic transformation without complementary investments in agribusiness, technology, and market integration. Countries therefore need enabling policy environments and work opportunities that allow young people to thrive in agriculture and the broader agrifood system. The African Agribusiness Youth Strategy (AAYS) aims to create an enabling environment for youth entrepreneurship and employment in agribusiness across African Union Member States. The strategy was developed in response to the Malabo commitment to create job opportunities for at least 30 percent of youth in

agricultural value chains and calls for preferential entry and participation by women and youth in gainful and attractive agribusiness opportunities.

The strategy was endorsed by the 4th Ordinary Session of the AU Specialized Technical Committee (STC) on Agriculture, Rural Development, Water, and Environment. The STC further requested that a monitoring and evaluation (M&E) framework for the AAYS be developed and integrated into the CAADP Biennial Review (BR) monitoring and reporting process. YAPI responds to the African Union Commission's call for a robust diagnostic, planning, monitoring, evaluation, and mutual-accountability framework for implementing the AAYS and tracking Member State progress in empowering youth in agrifood systems. YAPI aims to provide a standardized methodology for monitoring and reporting youth performance in agrifood systems across AU Member States. As a composite measure, it offers a multidimensional view of youth employment and opportunity, making it a potential instrument for reporting on youth-related commitments under the Kampala CAADP Declaration.

Realizing the full potential of YAPI as a standardized monitoring tool requires sustained investment in the data infrastructure that underpins it. This includes harmonizing national data collection methodologies, strengthening youth-disaggregated statistical systems, adopting common indicator definitions across Member States, and establishing a data governance framework to ensure results are robust and comparable over time.

1.2 Rationale for the Youth in Agrifood Systems Performance Index (YAPI)

Over the past decade, Member State progress toward empowering youth in agricultural value chains has been monitored through the CAADP Biennial Review (BR) process. The BR introduced an indicator under Commitment 4 (Performance Category 4.3), "Number of youth engaged in new jobs in the agricultural value chain," to track youth employment in agriculture. While this created an important entry point for youth-employment data in agricultural monitoring frameworks, the indicator has several limitations that prevent it from providing a comprehensive picture of youth engagement.

First, the indicator is narrow in scope, focusing primarily on the number of jobs created within agricultural production, and largely excluding other critical segments of the agrifood system, such as processing, packaging, distribution, agritech, marketing, food services, and

input supply. This fails to reflect the full spectrum of youth participation and innovation across the entire agrifood value chain.

Second, the indicator places greater emphasis on quantity over quality, tracking the number of jobs without accounting for key qualitative aspects such as job security, income levels, working conditions, sustainability, or opportunities for skills development and career progression. As a result, it does not provide insights into whether these jobs are decent, productive, or aligned with youth aspirations.

Third, the indicator is output-oriented: it measures the end result, the number of youth jobs, without providing information on the enabling factors or structural drivers that produced the outcome. It does not show whether an increase in youth jobs is linked to government



policies or programmes that improve access to finance, land, productive resources, training, markets, or supportive regulations. Consequently, it provides limited insight into why progress has occurred, or not occurred, making it difficult for policymakers to identify effective interventions or replicate success.

Fourth, there are major data collection and reporting challenges at the country level. Many Member States lack the institutional capacity, standardized methodologies, and disaggregated data systems necessary to collect and report reliable and consistent data on youth employment in agriculture. This has led to frequent cases of incomplete, outdated, or missing data across BR cycles, undermining the credibility and comparability of results.

Finally, the current indicator is not fully aligned with the strategic priorities of the African Agribusiness Youth Strategy (AAYS). The AAYS promotes a holistic approach to youth empowerment in agrifood systems, encompassing entrepreneurship, innovation, digital transformation, value addition, inclusive finance, and

green jobs - areas that the existing indicator does not capture.

This represents a strategic shift toward an agrifood-systems approach, with youth empowerment as one of its priorities. This focus encompasses (i) access to productive resources such as land, finance, inputs, and technology; (ii) meaningful participation in decision-making and policy processes; (iii) economic agency through decent employment, entrepreneurship, and fair income; and (iv) voice and leadership in agrifood governance structures. Under the new declaration, Member States committed to empowering at least 30 percent of youth in agrifood value chains by 2035. Given this broadened focus, a more holistic and multidimensional performance framework is needed to capture the diverse and evolving roles of youth within agrifood systems.

It is in this context that the African Union Commission, in collaboration with AUDA-NEPAD, RECs, and AGRA, is developing the Youth in Agrifood Systems Performance Index (YAPI).

1.3 YAPI Development Process

The initial Youth in Agrifood Systems Performance Index (YAPI) technical meeting took place on 26-28 June 2024 in Kigali, Rwanda. The meeting brought together experts from BR Thematic Working Group 4 (TWG4), representatives of Regional Economic Communities (RECs) and Member States, and partner institutions supporting the YAPI process, including the AUC,

AUDA-NEPAD, and AGRA. The objective was to initiate technical discussions on the development, structure, and implementation roadmap of YAPI. The meeting proposed five thematic domains and developed an initial list of aligned indicators to guide formulation of the index framework.

1.4 The YAPI Framework and Domains

YAPI comprises five domains: (i) Education, Skills and Technology; (ii) Productive Resources and Services; (iii) Economic Opportunities; (iv) Policy Engagement and Governance; and (v) Sustainability and Resilience to Shocks (see Figure 1). Together, the domains capture key enablers of youth participation and job creation,

ranging from access to knowledge, resources, and markets to inclusive policy environments and the capacity to withstand climate and economic shocks. They therefore provide a multidimensional measure of progress in creating opportunities and empowering youth in agrifood systems.



Figure 1: Domains of the Youth in Agrifood Systems Performance Index (YAPI)



Education, Skills and Technology

Indicators under this domain assess the level and quality of education and training available to youth in agrifood systems. They cover formal and informal education, vocational training, digital literacy, science, technology, innovation, and mentorship. The domain also examines whether skills-development opportunities align with the needs of modern agriculture and agribusiness, including climate-smart and digital practices. Indicators currently focus largely on youth engaged in AFS. In more diversified economies, where AFS represents a smaller share of GDP and employment, a lower share of youth in AFS-focused education may reflect sector size rather than underperformance. Scores should therefore be interpreted alongside each country's agricultural intensity and economic diversification.



Productive Resources and Services

This domain assesses youth access to the inputs, assets, infrastructure, and services needed to thrive in agrifood systems. Central to the domain is access to finance, including credit, savings, insurance, and investment, which remains limited for many young people because they lack collateral or formal records. The domain also covers land ownership and secure tenure, rental and sharecropping arrangements, improved inputs, technology, mechanization, roads, energy, ICT, and extension and advisory services. It further considers whether policies enable or constrain youth access to these resources.



Economic Opportunities

This domain assesses youth participation in agrifood systems through absolute and relative measures of employment and entrepreneurship. Key metrics include the number of youth engaged in agrifood roles, youth in AFS as a share of total AFS employment, and AFS-employed youth as a share of total youth employment. Using proportional measures alongside absolute numbers helps account for population growth and sector size, enabling more meaningful cross-country comparisons. The domain evaluates the availability and quality of opportunities, focusing on decent work: jobs that are productive, secure, and provide fair income and social protection. It also examines informal work, unemployment, job stability, and income, highlighting progress and constraints affecting sustainable, dignified, and fulfilling livelihoods for young agripreneurs. The concept of dignified and fulfilling work, as advanced by the Mastercard Foundation, extends beyond income security to include autonomy, social recognition, and alignment with youth aspirations. Future iterations of YAPI could incorporate additional qualitative dimensions of work quality informed by this framework.



Policy Engagement and Governance

This domain focuses on two complementary dimensions of youth inclusion in agrifood policy. The first is procedural: the extent to which youth are represented in policy dialogues, governance structures, and decision-making processes at national and regional levels. The second is substantive: whether national policies, investment plans, agrifood strategies, and budget allocations explicitly target youth empowerment and address youth-specific barriers. Both dimensions are assessed because meaningful governance requires not only youth presence in policy spaces but also policies whose content advances youth interests.



Sustainability and Resilience to Shocks

This domain evaluates the extent to which youth in agrifood systems are equipped to adapt to and recover from shocks, including climate change and economic crises. It includes indicators related to business and environmental sustainability, adoption of climate-smart practices, and resilience-building programmes that safeguard youth livelihoods and support the long-term viability of agrifood systems.



02 Methodology

2.1 Selection of Pilot Countries and Processes

Building on the outcomes of the technical workshop held in Kigali in June 2024, and subsequent technical consultations, the Youth in Agrifood Systems Performance Index (YAPI) Indicators Review Meeting was held from 3–4 March 2025 in Nairobi, Kenya. The meeting reviewed and finalized the YAPI indicators and parameters to ensure alignment with the CAADP Biennial Review (BR) framework. It also refined data collection tools and reporting templates; discussed the pilot testing of YAPI in selected Member States; revised the rollout roadmap and its integration into the CAADP BR process; and identified the capacity-building needs of the African Union Commission (AUC), Regional

Economic Communities (RECs), and Member States for effective data collection and implementation.

During the YAPI Review Meeting in Nairobi, the following countries were pre-identified in consultation with Regional Economic Communities (RECs) for the pilot phase. The selection was based on criteria such as geographical and language representation, readiness to implement, policy framework, and data availability. RECs played a key role in identifying these countries and will provide coordination and technical support during the pilot. See list of pilot countries in Table 1.

Table 1: List of YAPI Pilot Countries

Region	Proposed Pilot Country	Final Pilot Country
ECOWAS	Nigeria, Gambia, Cote D'Ivoire and Cabo Verde	Nigeria, Gambia, and Cote D'Ivoire
ECCAS	Cameroon, Gabon and Congo Brazzaville	Cameroon
UMA	Morocco, Tunisia and Egypt	Morocco, Tunisia, and Egypt
EAC/IGAD/COMESA	Kenya, Tanzania, Rwanda, and Uganda	Kenya and Uganda
SADC	South Africa, Malawi, Eswatini, and Madagascar	Malawi and Eswatini

A total of 19 countries:

(Cabo Verde, Cameroon, Congo Brazzaville, Côte d'Ivoire, Djibouti, Egypt, Eswatini, Gabon, Gambia, Kenya, Madagascar, Malawi, Morocco, Nigeria, Rwanda, South Africa, Tanzania, Tunisia, Uganda), covering the five Regional Economic Communities, were initially selected for the pilot phase. Of these, 17 participated in the July 2025 Lagos training workshop, and 11 ultimately submitted data for validation and were included in the final analysis.

Table 1B: Movement of Countries Through the YAPI Pilot Process

Stage	Number (Countries)
Initially selected for pilot (Nairobi, March 2025)	19 (Cabo Verde, Cameroon, Congo Brazzaville, Côte d'Ivoire, Djibouti, Egypt, Eswatini, Gabon, Gambia, Kenya, Madagascar, Malawi, Morocco, Nigeria, Rwanda, South Africa, Tanzania, Tunisia, Uganda)
Trained at Lagos workshop (July 2025)	17 (Cabo Verde, Cameroon, Côte d'Ivoire, Egypt, Eswatini, Gabon, Gambia, Kenya, Madagascar, Malawi, Morocco, Nigeria, Rwanda, South Africa, Tanzania, Tunisia, Uganda.)
Submitted data for validation	11 (Cameroon, Côte d'Ivoire, Egypt, Eswatini, The Gambia, Kenya, Malawi, Morocco, Nigeria, Tunisia, Uganda.)
Included in final analysis	11 (Eswatini, Malawi, Nigeria, The Gambia, Côte d'Ivoire, Cameroon, Morocco, Tunisia, Egypt, Uganda, Kenya)
Selected but did not submit data	4 (Madagascar, Gabon, Congo Brazzaville, Djibouti)

The eleven countries are: Eswatini, Malawi, Nigeria, the Gambia, Cote D'Ivoire, Cameroon, Morocco, Tunisia, Egypt, Uganda, and Kenya.

As part of the YAPI development process, a training workshop for regional and national experts was held on 15-17 July 2025 in Lagos, Nigeria. The workshop

equipped technical experts with the knowledge and tools needed to implement YAPI in selected pilot countries. Training focused on use of the YAPI data-



collection and reporting template and the digital platform developed to support data management. Participants also discussed country-level data-collection strategies and finalized a roadmap for integrating YAPI into the CAADP Biennial Review process. A data-

cleaning and validation workshop was held on 13-14 October 2025 in Addis Ababa, Ethiopia, followed by a technical writeshop on 24-26 November 2025 in Lusaka, Zambia. The appendix provides photographic documentation of these events.

2.2 The YAPI Framework

YAPI is structured around five domains and 29 candidate indicators, which were evaluated and validated during the pilot process. For the purposes of this report, 'youth' refers to individuals aged 15–34, consistent

with the African Union's definition, and this age range is applied uniformly across all indicators, denominators, tables, and data sources in the report. The domains are as follows:



Education, Skills and Technology

Assesses completion and quality of education, relevant skills training, and technological capabilities that enable youth to engage effectively in AFS. The domain contains three indicators.



Productive Resources and Services

Evaluates youth access to, and the quality of, productive resources and services. The domain contains seven indicators covering technology and inputs, finance, digital tools, advisory services, mechanization, irrigation, and energy.



Economic Opportunities

Measures the availability and quality of economic opportunities in AFS that are accessible to youth. The domain contains seven indicators covering employment, agribusiness, market systems, enterprise sustainability, decent work, and incentives.



Policy Engagement and Governance

Evaluates youth involvement in decision-making, policy engagement, and governance processes related to AFS. The domain contains five indicators covering participation, leadership, policy content, implementation, and advocacy.



Sustainability and Resilience to Shocks

Measures the capacity of youth engagement in AFS to withstand economic, environmental, and social shocks. The domain contains seven indicators covering climate variability, extreme events, market shocks, climate information, sustainable practices, employment, and insurance.

Constructing YAPI requires weighting and aggregating indicators into domains and then combining the domain scores into a composite index. The indicator level score was computed, normalised as a ratio and weighted to

obtain to the domain score (0-1). The composite index (YAPI) was obtained as the sum of the geometric mean of the five domains which ranges from 0 to 5.

2.3 Weighting Methodology

Several weighting techniques are available, including statistical approaches such as regression analysis, principal components or factor analysis, benefit-of-the-doubt methods, and unobserved-components models, as well as participatory approaches such as budget allocation, public or expert opinion, equal weighting, and analytic hierarchy processes. For the pilot, two approaches were used: equal weighting at the indicator level and expert-derived indicator weights. Equal weighting is applied to indicators, not domains: each of the 29 indicators receives the same weight, so a domain's maximum potential contribution to the composite score depends on how many indicators

it contains. Under the equal-indicator approach, each of the 29 indicators receives the same weight; consequently, domain weights are proportional to the number of indicators assigned to each domain. Expert weights were elicited in each pilot country and aggregated for the continental analysis. The two approaches produced similar aggregate scores, although sensitivity should also be assessed at country, domain, classification, and ranking levels.

A panel of 178 experts and stakeholders from the 11 pilot countries participated in the weighting exercise conducted during national consultations from 3–13



November 2025. Panel size by country was: Nigeria (45), Kenya (42), Egypt (19), Eswatini (16), Malawi (16), Uganda (10), Cameroon (10), Gambia (8), Morocco (6), Côte d’Ivoire (5), and Tunisia (1). Participants represented 15 stakeholder categories spanning policymakers, youth organizations, universities, research centres, think tanks, regional agencies, and development partners across all five AU regions, though representation was concentrated in Agribusiness (63 experts) and Policy (50), with most other categories represented by three or fewer experts. They independently scored the 29 YAPI indicators within

each domain according to their perceived importance. Individual weights were aggregated using the geometric mean, following Forman and Peniwati (1998), and rescaled to sum to 1 within each domain. Because participation was purposive rather than probability-based, and because some countries had very limited panel sizes, the resulting weights should be interpreted as structured expert judgements rather than statistically representative preferences; country-level weight estimates from the smallest panels should be treated with particular caution. $w_k = \sqrt{J \cdot \prod_{j=1}^J w_{kj}}$

Table 2: Example of weighting “Youth access to land and secure rights” from five experts

Expert	1	2	3	4	5
Weight	1	0.5	0.5	1	1

Note: Following geometric aggregation of individual expert weights, the resulting panel weights were rescaled to sum to 1 within each domain before application in the index calculation.



Table 2: Example of weighting “Youth access to land and secure rights” from five experts

Method	Type	Benefits	Drawbacks	Purpose Assessment	Comparison	Application for YAPI
EW	Equal weighting	Simple, replicable and straightforward.	Lacks insights into indicator relationships. Risk of double weighting.	General	Yes	Yes
EO	Expert opinion	Simple, realistic, iterative and straightforward	Adjustable based on policy direction and idiosyncrasies. Requires expert understanding of the relationship of the indicators.	General	Yes	Yes
PCA/FA	Statistic-based	Reduces the risk of double weighting, classifying ungrouped indicators.	Dimensions are unpredictable, and weights may differ from reality.	General	Yes	No
BOD	Statistic-based	Relies less on weighting assumptions.	Results may not be comparable and lack transparency. Existence of a multiplicity of solutions.	General	No	No
BAL	Public/ Expert opinion-based	Sensitive to national priorities. Hierarchical structure is in line with the structure of YAPI frameworks.	Weights are country-specific Optimal only for a maximum of 10-12 indicators. Tends to measure urgency rather than importance. Is region-specific.	General	Yes	No
AHP	Public/ Expert opinion-based	Simple and flexible. Provides consistent verification operation. Available for both quantitative and qualitative data. Weights less sensitive to errors of judgement. Efficiently integrates the processes of weighting, aggregation, and index construction.	Requires a high number of pairwise comparisons. May create inconsistencies and cognitive stress if each cluster consists of too many indicators.	General	Yes	No
UCM	Statistic-based	Allows for statistical significance when conducting comparisons. Transparent and explicit.	The dependent variable is unknown. Results are sensitive to outliers. May create identification problems if indicators are multicollinear. Reliability and robustness may be lost when data is inadequate	General	Yes	No

Note: EW—Equal Weighting; PCA/FA—Principal Components Analysis/Factor Analysis; BOD—Benefit of the Doubt approach; BAL—Budget Allocation Process; AHP—Analytic Hierarchy Processes; UCM—Unobserved Components Models (UCM).

Source: Greco et al. (2019); Gan et al., 2017; Becker et al. (2017); OECD (2008), and author’s own interpretation

03

Pilot Country Results

3.1 Overview of Participating Countries

The 11 pilot countries are Cameroon, Côte d'Ivoire, Egypt, Eswatini, The Gambia, Kenya, Malawi, Morocco, Nigeria, Tunisia, and Uganda. The sample includes populous countries such as Nigeria and Egypt, as well as smaller countries such as Eswatini and The Gambia. Together, they account for approximately 580 million people, equivalent to 38.6 percent of Africa's estimated 1.5 billion population, based on the 2022-2024 averages reported in Table 4, and span all five geographic regions. The sample covers several major Regional Economic Communities and income groups, but it is not

statistically representative of all AU Member States. To contextualise the pilot sample within the broader continental landscape, Table 4a below compares the 11 pilot countries against all 55 AU Member States across four dimensions: geographic and REC coverage, income classification, agrifood employment share, and statistical data capacity. This comparison is intended to assist readers in assessing where the pilot evidence is most and least likely to generalise across the continent. Table 4a: Representativeness of the YAPI Pilot Sample Relative to all 55 AU Member States

Table 1: List of YAPI Pilot Countries

Country / Reference	AU Region	Income Group	Agrifood Employment (%)	SPI Score 2024 (0–100)
All 55 AU Member States	All 5 AU regions	All 4 WB income groups	5–85 (avg. ~55)	19–82 (SSA avg. ~57)
Egypt	North Africa	Lower-Middle Income	17.5	78.1
Tunisia	North Africa	Lower-Middle Income	18.0	75.5
Kenya	East Africa	Lower-Middle Income	32.3	73.4
Morocco	North Africa	Lower-Middle Income	33.0	73.1
Côte d'Ivoire	West Africa	Lower-Middle Income	45.2	70.2
Nigeria	West Africa	Lower-Middle Income	34.3	69.1
The Gambia	West Africa	Low Income	48.0	67.0
Cameroon	Central Africa	Lower-Middle Income	43.4	66.0
Malawi	Southern Africa	Low Income	61.7	64.3
Uganda	East Africa	Low Income	65.9	64.1
Eswatini	Southern Africa	Lower-Middle Income	16.0	61.0
11-Country Pilot (summary)	All 5 AU regions	8 Lower-Middle, 3 Low Income	16–66 (avg. ~38)	61–78 (avg. 69.3)

Note: (a) Population: the 11 pilot countries account for ~580 million people, equivalent to 38.6% of Africa's ~1.5 billion population (World Bank WDI 2022–2024 average). (b) Income group: the pilot excludes Upper-Middle and High Income AU Member States, limiting generalisability to more advanced economies such as South Africa, Botswana, or Seychelles. (c) Agrifood employment: ILOSTAT modelled estimates, 2023 (employment in agriculture as % of total employment). (d) SPI: World Bank Statistical Performance Indicators overall score, 2024. The pilot average of 69.3 exceeds the Sub-Saharan Africa and global IDA country averages of ~57, suggesting data challenges may be more pronounced at full continental scale

The key external validity limitation to note is the absence of Upper-Middle and High Income AU Member States, and the relatively stronger statistical capacity of the pilot countries compared to the broader AU membership. Both factors mean that countries with

weaker data systems, which represent a substantial share of the 55 Member States, may face greater data collection challenges in a full YAPI rollout than the pilot experience suggests. Table 4b provides the full country-level detail for the 11 pilot countries.



Table 4b: List of the 11 pilot countries

Country	Population	Geographic Region	Regional Economic Community	Economic classification
Nigeria	227,904,440	Western	ECOWAS	Lower-middle income
Egypt	114,564,090	Northern	UMA, COMESA	Lower-middle income
Kenya	55,341,470	Eastern	COMESA, EAC, IGAD	Lower-middle income
Uganda	48,661,471	Eastern	COMESA, EAC, IGAD	Low-income
Morocco	37,707,581	Northern	UMA	Lower-middle income
Cote D'Ivoire	29,879,337	Western	ECOWAS	Lower-middle income
Cameroon	28,376,401	Central	ECCAS	Lower-middle income
Malawi	21,109,499	Southern	SADC, COMESA	Low-income
Tunisia	12,198,958	Northern	UMA, COMESA	Lower-middle income
The Gambia	2,698,101	Western	ECOWAS	Low-income
Eswatini	1,230,748	Southern	SADC	Lower-middle income

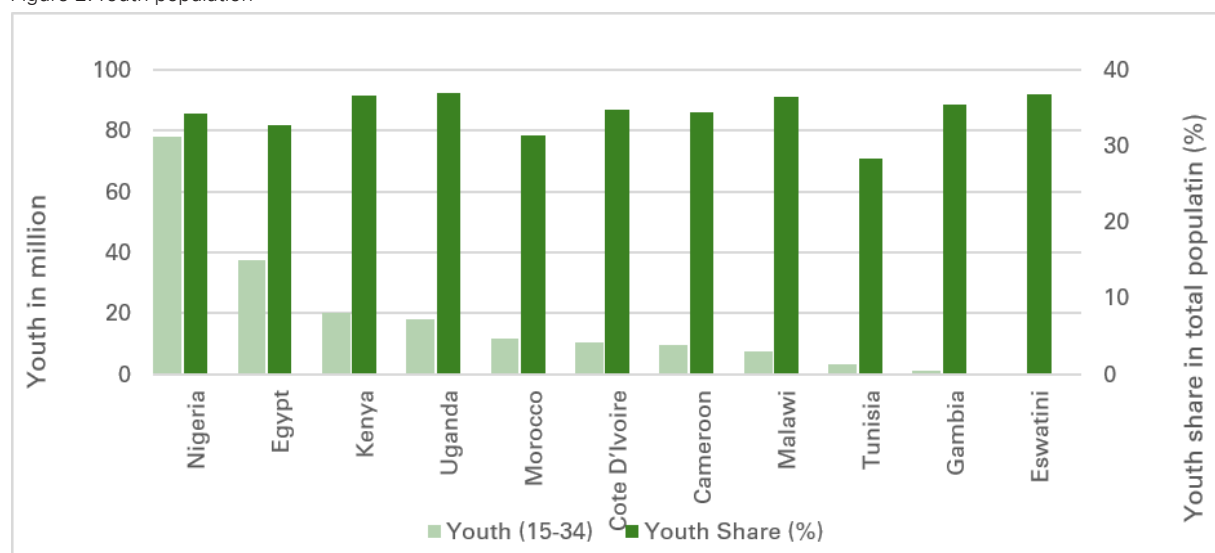
Sources: ILO (2025) and World Bank Atlas method (2024). Population figures are averages for 2022-2024; income classifications are for 2024.

Youth population: Across the pilot countries, people aged 15–34 constitute a substantial share of national populations (Figure 2). Uganda, Eswatini, Kenya, Malawi, and The Gambia record the largest youth shares, ranging from 35.5 percent to 37.9 percent. Youth account for 34.3 percent to 34.8 percent of the populations of Nigeria, Cameroon, and Côte d'Ivoire. In Egypt, Morocco, and Tunisia, youth shares are lower, ranging from approximately 28.4 percent to 32.7 percent.

In absolute terms, Nigeria, with 78.1 million youth, and Egypt, with 37.5 million, have the largest youth

populations aged 15-34 among the pilot countries. Kenya, with 20.3 million, and Uganda, with 17.9 million, are followed by Morocco (11.8 million), Côte d'Ivoire (10.4 million), Cameroon (9.8 million), and Malawi (7.7 million). Tunisia has approximately 3.5 million youth, while The Gambia and Eswatini each have fewer than one million. Gender distributions are broadly balanced across the pilot countries. Youth aged 15-24 account for 54 percent of the total youth population, compared with 46 percent for those aged 25-34. The size and share of the youth population underscore its importance to the future transformation and sustainability of Africa's agrifood systems.

Figure 2: Youth population



Source: Authors' calculations based on ILO (2025).

3.2 Comparative Analysis of YAPI Scores

This section examines youth performance in agrifood systems across the eleven pilot countries. Country comparisons should be read alongside the missing-data rates in Section 3.4. Because missing values are carried into aggregation as zeros in some cases, a low domain score may reflect measured performance, incomplete data coverage, or both. Rankings may therefore reflect differences in data availability as well as differences in reported outcomes. The analysis presents an aggregate score for the pilot sample and country-level scores for comparative purposes.

Performance is assessed across five domains: Education, Skills and Technology; Productive Resources and Services; Economic Opportunities; Policy Engagement and Governance; and Sustainability and Resilience to Shocks. Each domain contains multiple indicators and is scored using equal-indicator and expert-weighting approaches. Under equal weighting, each indicator receives the same weight. Under expert weighting, weights reflect experts' assessments of each indicator's contribution to its domain. Indicator scores are multiplied by their assigned weights, aggregated within domains, and then combined into the overall YAPI score.

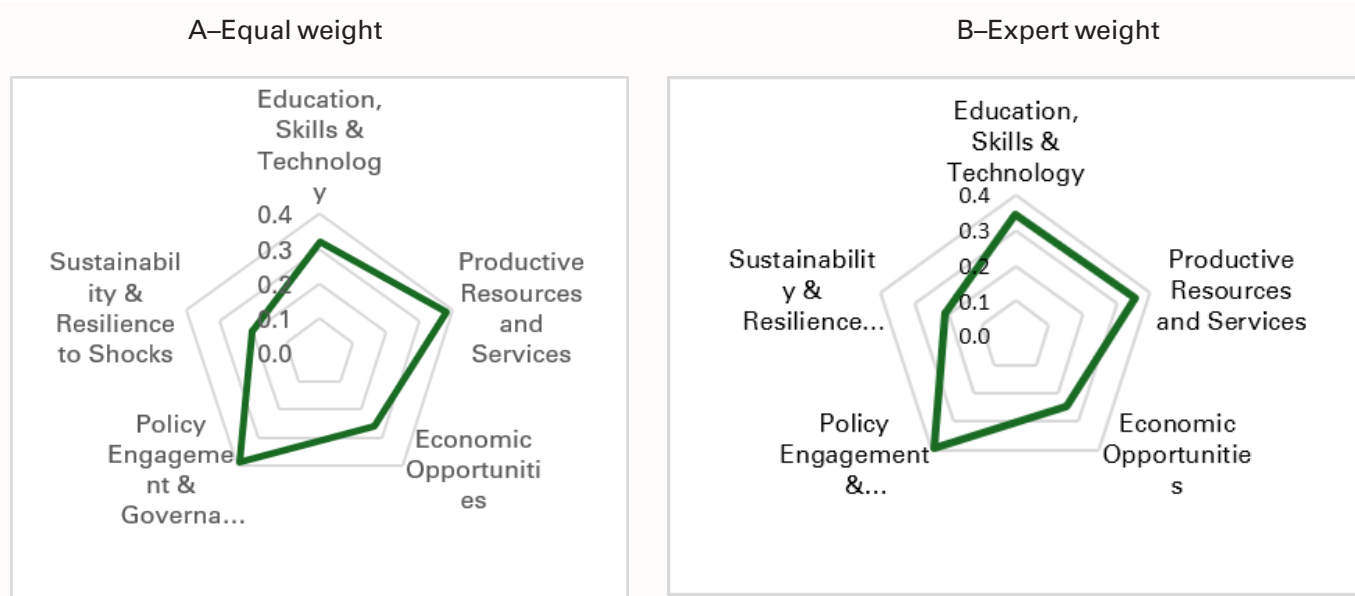
The aggregate YAPI score for the pilot sample is 1.549 out of 5 under equal weighting and 1.553 under expert weighting. The small difference indicates limited sensitivity of the aggregate score to these two weighting schemes; it does not, by itself, establish the robustness of country rankings, domain results, or classifications. Overall recorded performance remains modest, highlighting persistent structural constraints facing youth in agrifood systems.

Country ordering varies by weighting method. Uganda and Egypt record the highest scores under equal weighting, while Eswatini, Uganda, and Malawi lead under expert weighting. Cameroon and Côte d'Ivoire remain at the lower end under both approaches. The remaining countries occupy a middle range, with some moving positions when expert weights are applied. Country values should be reconciled with Table 5 and Annex 2 before publication.

Figure 3 presents the contribution of each domain to the overall YAPI score under equal and expert weighting. Domain 4, Policy Engagement and Governance, makes the largest contribution, with values of 0.386 and 0.395, respectively. Domain 2, Productive Resources and Services, contributes 0.379 and 0.357, while Domain 1, Education, Skills and Technology, contributes 0.319 and 0.345. Domain 3, Economic Opportunities, contributes 0.262 and 0.245, and Domain 5, Sustainability and Resilience to Shocks, contributes 0.202 and 0.211. Annex 1 presents country-level domain contributions under both weighting approaches.

These figures represent each domain's weighted contribution to the composite score, not a directly comparable performance measure: domains with a larger assigned weight have a higher potential contribution regardless of underlying performance. Domain 4's fewer indicators (5, versus 7 in Domains 2, 3, and 5) means its high contribution reflects either its assigned domain weight or genuinely strong reported performance, not indicator count. Domain-level scores on a common 0–1 scale

Figure 3: YAPI score by weighting method



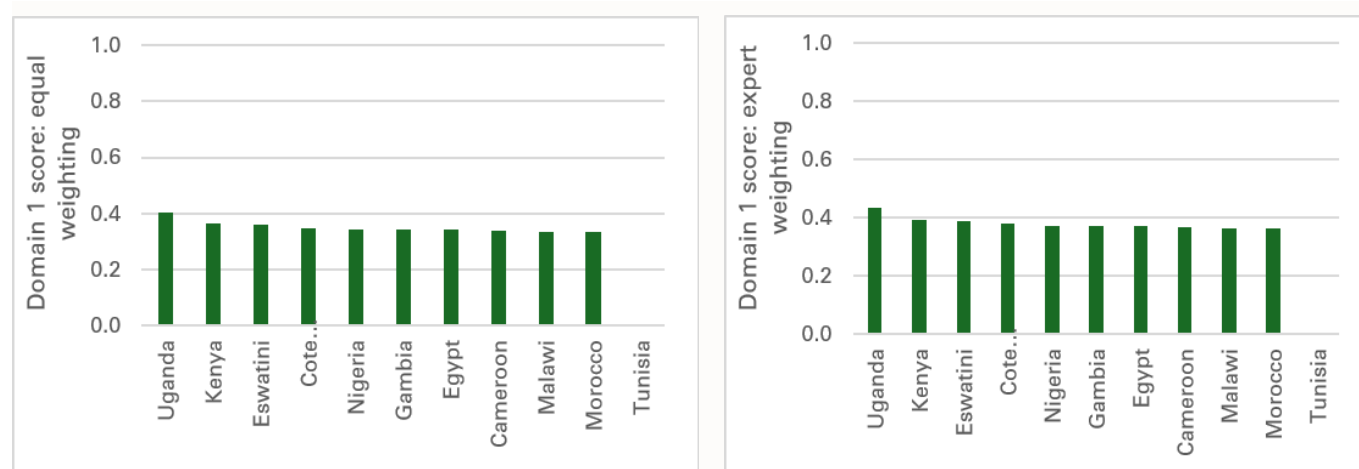
Source: Authors' calculations based on YAPI pilot data.

Domain 1: Education, Skills and Technology: The aggregate contribution of this domain increases from 0.319 under equal weighting to 0.345 under expert weighting, reflecting the higher aggregate expert weights assigned to indicators in this domain. Completion of agrifood-related TVET is the largest contributor. This pattern indicates that experts assign substantial importance to practical and employable skills, although it should not be interpreted as evidence that TVET alone is the primary pathway into productive agrifood employment.

Use of digital agritechnology contributes only marginally under both weighting schemes. This may reflect limited adoption, data gaps, or both. Institutionalized mentorship records a zero contribution under both approaches. A zero may indicate that a programme does not exist, that the country did not report data, or

that the reported value was coded at the lower bound. Because the current data do not distinguish these cases reliably, the result should not be interpreted as definitive evidence that mentorship is absent across all pilot countries. Country validation should clarify whether zero scores reflect actual conditions or reporting gaps. Across countries, most Domain 1 scores cluster within a relatively narrow range. Uganda records the highest score in the pilot sample, followed by Kenya and Eswatini (Figure 4). Nigeria records a lower score under both weighting schemes; because Nigeria reports complete Domain 1 data, this result is less likely to be driven by missing information. Expert weighting raises most scores but does not substantially change the ordering. The pattern indicates limited differentiation within the pilot sample, but it does not by itself identify the institutional causes of country differences.

Figure 4: Domain 1 Score at Country Level (equal and expert weighting)



Source: Authors' calculations based on YAPI pilot data.

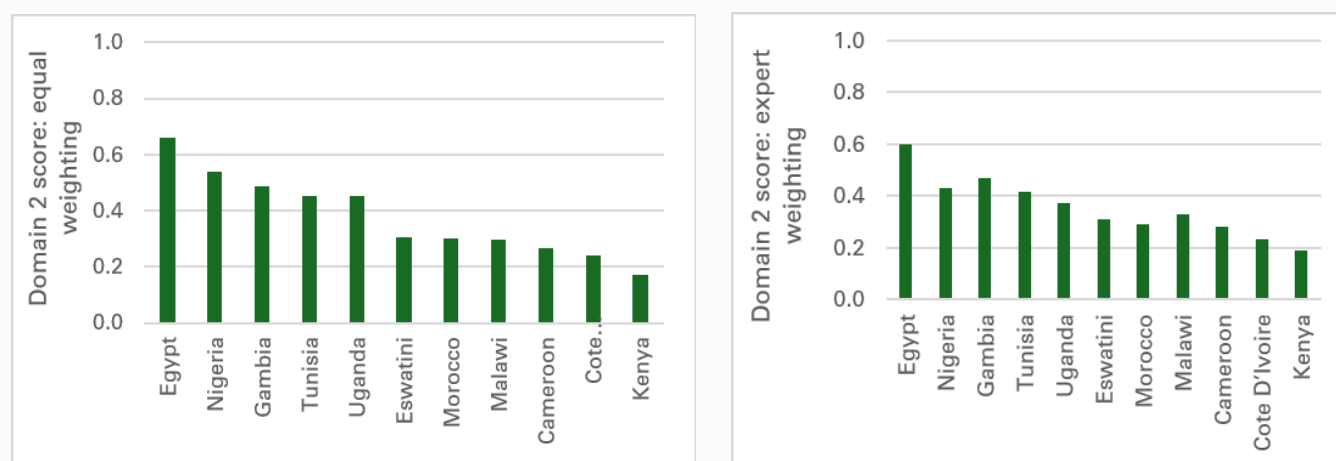
Domain 2: Productive Resources and Services: This domain records one of the larger aggregate contributions, although its value declines from 0.379 under equal weighting to 0.357 under expert weighting. The change reflects shifts in indicator weights rather than changes in the underlying country data. Access to advisory, business, and information services makes the largest contribution under both approaches. Expert weighting increases the relative contribution of financial services and reduces that of improved inputs, indicating differences in assessed importance rather than evidence of causal impact.

Secure land rights, irrigation, affordable energy, and mechanization make comparatively small contributions

to the recorded domain score. These values may reflect low access, incomplete data, indicator scaling, or a combination of these factors. The results are consistent with persistent constraints on youth access to assets and infrastructure, but causal interpretations require additional evidence beyond the composite scores. This domain displays wide cross-country variation in recorded access to land, inputs, finance, and services (Figure 5). Egypt records the highest equal-weight score, while Nigeria, Morocco, and The Gambia also score relatively highly. Kenya and Côte d'Ivoire record lower scores. Expert weighting compresses some country differences, but the rankings should be interpreted jointly with data-completeness information.



Figure 5: Domain 2 Score at Country Level (equal and expert weighting)

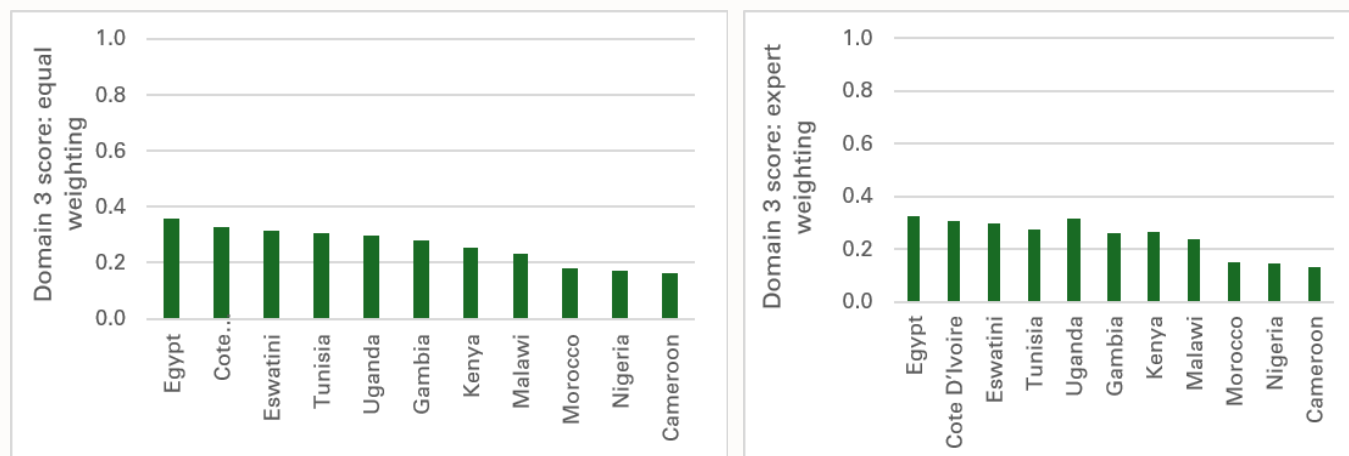


Source: Authors' calculations based on YAPI pilot data.

Domain 3: Economic Opportunities: The aggregate contribution declines from 0.262 under equal weighting to 0.245 under expert weighting. Under equal weighting, the existence of incentives for private firms to hire youth makes the largest contribution; expert weighting reduces its relative contribution. Indicators related to job creation, youth-led start-ups, and enterprise survival make smaller contributions. The recorded pattern suggests that economic opportunities remain limited, but the scale, quality, and durability of youth enterprises cannot be established from the composite score alone.

The comparatively low contributions of decent-work conditions and access to incentives suggest a qualitative gap in the opportunities captured by the index. Youth may enter agrifood systems under insecure or low-return conditions, but this interpretation should be tested against underlying labour-market and enterprise data. Cross-domain relationships are conceptually important, although the descriptive index does not establish causal links among education, finance, governance, and economic outcomes.

Figure 6: Domain 3 Score at Country Level (equal and expert weighting)



Source: Authors' calculations based on YAPI pilot data.

Country-level performance in Economic Opportunities is mixed (Figure 6). Egypt and Eswatini record the highest equal-weight scores, while Uganda and Kenya are stable or improve slightly under expert weighting. Cameroon, Morocco, and Nigeria record lower scores under both approaches. These differences describe relative positions within the pilot sample and should not be interpreted as direct measures of the effect of agrifood growth on youth outcomes.

existence of evidence-based youth policies, youth participation in policymaking, and implementation of youth-led agrifood policies. Expert weighting raises the relative contribution of youth participation in policy dialogue, reflecting the priority assigned by participants rather than demonstrated policy effectiveness.

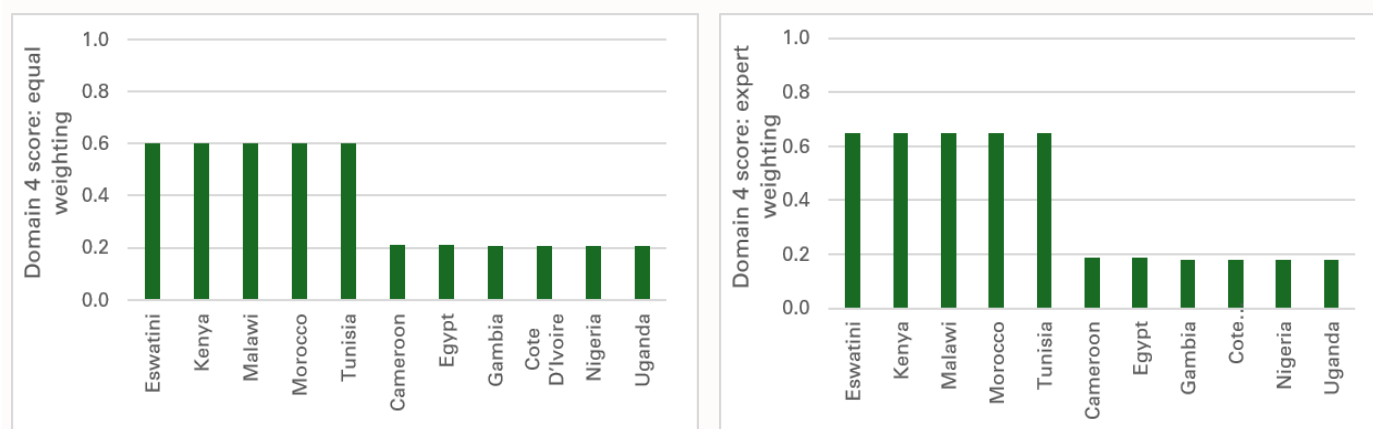
Domain 4: Policy Engagement and Governance: This domain makes the largest aggregate contribution, increasing from 0.386 under equal weighting to 0.395 under expert weighting. Key contributors include the

However, the domain also reveals a gap between policy frameworks and grassroots leadership. Indicators related to youth leadership in cooperatives and governance structures are comparatively weaker, suggesting that institutional inclusion has not fully translated into organizational power at the local level. Policy engagement can enable improvements in

resources, opportunities, and resilience, but only if implementation mechanisms are sufficiently resourced

and accountable.

Figure 7: Domain 4 Score at Country Level (equal and expert weighting)



Source: Authors' calculations based on YAPI pilot data.

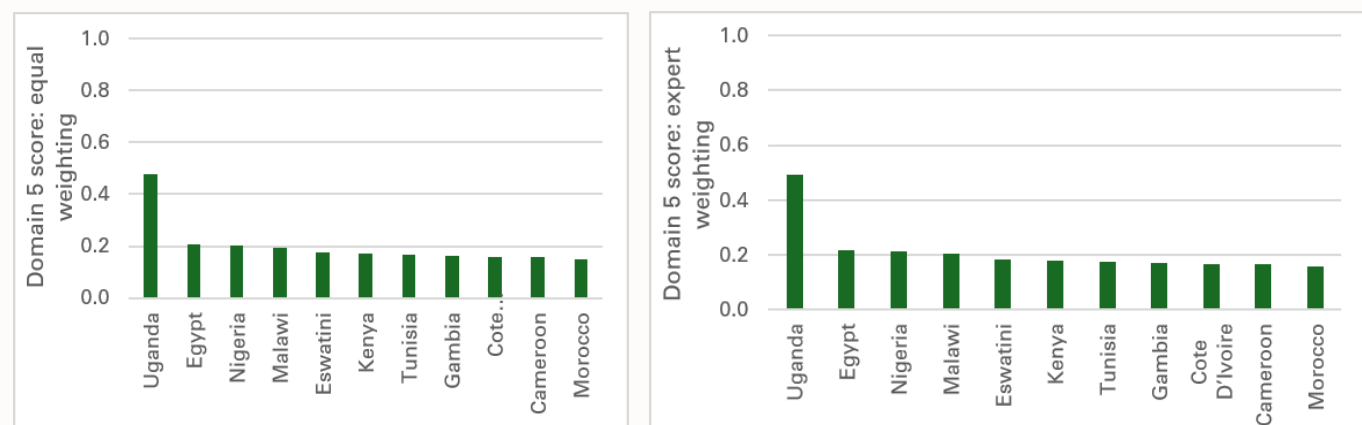
The Policy Engagement and Governance domain reveals two broad country groups. Eswatini, Kenya, Malawi, Morocco, and Tunisia record relatively high scores, which increase under expert weighting (Figure 7). This pattern is consistent with the presence of formal policy and participation mechanisms, but it does not establish their quality or effectiveness. Cameroon, Côte d'Ivoire, Egypt, The Gambia, Nigeria, and Uganda record lower scores. Expert weighting reinforces rather than narrows this divide.

3 captures the quantity of youth AFS employment, while this Domain 5 indicator specifically captures the resilience and sustainability quality of that employment. However, indicators related to climate-smart practices, use of climate information, and insurance coverage contribute minimally, revealing significant vulnerabilities. The negligible contribution of insurance and very low uptake of climate-smart and information-based practices for the YAPI pilot countries point to systemic exposure to shocks.

Domain 5: Sustainability and Resilience to Shocks: Sustainability and Resilience to Shocks remains the weakest domain for the YAPI pilot countries (0.202 to 0.211). Performance is heavily driven by the proportion of youth in stable and resilient agrifood employment, defined here as employment in enterprises or production systems that have demonstrated capacity to withstand climate, market, and economic shocks, which dominates the domain. This indicator differs from the employment measure in Domain 3: Domain

Recorded Domain 5 performance is low to moderate across most countries (Figure 8). Uganda has the highest score in the pilot sample under both weighting approaches. Egypt, Nigeria, and Malawi form a second group, while most other countries cluster at lower levels. These results are consistent with limited resilience and risk-management capacity, but interpretations should account for missing data and the precise definition of each resilience indicator.

Figure 8: Domain 5 Score at Country Level (equal and expert weighting)



Source: Authors' calculations based on YAPI pilot data.



3.3 Typology of the Performance by Country

Table 5 summarizes country performance under equal and expert weighting. The typology uses fixed, provisional pilot bands based on the theoretical 0-5 scale: low performance at or below 1.25 (25 percent of the maximum), moderate performance above 1.25 and up to 2.50 (25–50 percent), and high performance above 2.50 (above 50 percent). These round-number thresholds were adopted for interpretability during the pilot phase and are not sample quartiles, statistically derived breakpoints, or externally validated normative benchmarks; they should be revisited and empirically validated once YAPI is rolled out across a larger, more

representative set of AU Member States. None of the 11 pilot countries reaches the high-performance threshold. Under equal weighting, Cameroon and Côte d'Ivoire fall in the low category. Under expert weighting, Cameroon remains in the low category, while Côte d'Ivoire moves marginally into the moderate category, illustrating how weighting choices can affect classifications near a threshold. Where a score coincides with high missing-data rates, readers should consult Table 7 in Section 3.4 and interpret the typology in light of data completeness.

Table 5: Typology of the Performance by Country

Country	Index			Proportion		Typology
	Equal (0–5)	Equal (0–5)	Equal	Expert	Equal	Expert
Cameroon	1.050	1.132	21.0	22.64	Low	Low
Côte d'Ivoire	1.220	1.264	24.4	25.28	Low	Moderate
Egypt	1.810	1.698	36.2	33.96	Moderate	Moderate
Eswatini	1.640	1.828	32.8	36.56	Moderate	Moderate
Gambia	1.455	1.452	29.1	29.04	Moderate	Moderate
Kenya	1.400	1.674	28.0	33.48	Moderate	Moderate
Malawi	1.545	1.781	30.9	35.62	Moderate	Moderate
Morocco	1.430	1.609	28.6	32.18	Moderate	Moderate
Nigeria	1.440	1.337	28.8	26.74	Moderate	Moderate
Tunisia	1.615	1.515	32.3	30.3	Moderate	Moderate
Uganda	1.840	1.791	36.8	35.82	Moderate	Moderate

Equal-weight scores are originally expressed on a 0-1 scale and rescaled by multiplying by 5 to enable comparison with expert-weight scores, which are presented on a 0-5 scale. Both approaches place all pilot

countries within the low-to-moderate range. Scores are relative to the observed range within the 11-country pilot sample.

3.4 Domain-Specific Insights (Missing Data Rates)

An assessment of missing-data rates across the five domains reveals substantial variation in the completeness of youth agrifood-systems data among the eleven pilot countries (Table 6). Domain 1 has the highest overall data completeness, although Tunisia,

Morocco, and Kenya record substantial gaps. Domain 2 is more mixed: Cameroon, Egypt, The Gambia, Nigeria, and Uganda report complete data, while Kenya and Tunisia record the largest gaps.

Table 6: Missing data rate by domain in %

Countries	Domain 1	Domain 2	Domain 3	Domain 4	Domain 5
Tunisia	83.33	75.00	50.70	69.77	68.18
Morocco	58.33	25.00	38.73	79.07	68.18
Kenya	55.56	82.14	72.54	0.00	4.55
Cote D'Ivoire	8.33	21.43	44.37	72.09	54.55
Eswatini	8.33	2.38	18.31	79.07	40.91
Cameroon	0.00	0.00	27.46	0.00	0.00
Egypt	0.00	0.00	0.00	0.00	0.00
Gambia	0.00	0.00	0.00	0.00	0.00
Malawi	0.00	34.92	6.34	58.140	68.180
Nigeria	0.00	0.00	19.01	0.00	36.36
Uganda	0.00	0.00	0.00	0.00	0.00



Domain 1 exhibits the highest data completeness overall, with most countries reporting minimal or no missing information. The exceptions are Tunisia (83%), Morocco (58%), and Kenya (56%), all of which show substantial gaps that should be factored into interpretation of their Domain 1 scores.

Performance in Domain 2 is more mixed. Cameroon, Egypt, The Gambia, Nigeria, and Uganda report complete data, while Kenya (82 percent) and Tunisia (75 percent) show particularly high missing-data rates. Missing data are more pronounced in Domain 3, where Côte d'Ivoire (44%), Kenya (73%), Morocco (39%), and Tunisia (51%) report high proportions of unavailable data.

Domain 4 shows substantial gaps for Côte d'Ivoire (72%), Morocco (79%), Eswatini (79%), and Tunisia (70%). By contrast, Cameroon, Egypt, Gambia, Kenya,

Nigeria, and Uganda provide complete or near-complete data for this domain.

Domain 5 presents the most challenging missing-data landscape overall. Although Cameroon, Egypt, The Gambia, and Uganda report complete data, Malawi, Morocco, and Tunisia each have missing rates of approximately 68 percent, while Nigeria has a missing rate of 36 percent. Graphical presentations of missing-data rates by country and domain are provided in Annex 4.

To help readers calibrate their interpretation of domain scores, Table 7 provides a data-confidence classification for each country-domain combination. A domain is classified as high confidence where missing data are below 20 percent, medium confidence where missing data are from 20 percent to 50 percent, and low confidence where missing data exceed 50 percent.

Table 7: Data Completeness and Score Classification by Country and Domain

Country	D1	D2	D3	D4	D5
Tunisia	Low	Low	Low	Low	Low
Morocco	Low	High	Medium	Low	Low
Kenya	Low	Low	Low	High	High
Côte d'Ivoire	High	High	Medium	Low	Low
Eswatini	High	High	High	Low	Medium
Cameroon	High	High	High	High	High
Egypt	High	High	High	High	High
Gambia	High	High	High	High	High
Malawi	High	Medium	High	Low	Low
Nigeria	High	High	High	High	Medium
Uganda	High	High	High	High	High

Note: High = <20% missing; Medium = 20–50% missing; Low = >50% missing data.

3.5 Comparison of Actual Missing Data and Zero in Scores by Domain

A comparison of actual missing observations with zero values in the scored dataset shows 68 missing cases and 91 zero values across the eleven countries and five domains. The continuous min-max transformation assigns a value of 1, not zero, to the minimum observed value. Additional zeros therefore arise from two other mechanisms: binary indicators reported as 'No' and missing values carried into aggregation as zero. The 23 additional zeros should not be interpreted as an effect of min-max normalization. Instead, they show that a zero score can represent either a substantive response or missing information, which limits interpretation unless the two are explicitly distinguished.

The discrepancy varies by domain. Domains 1 and 2 each contain 14 zero scores compared with 7 missing observations, while Domain 5 contains 26 zero scores compared with 20 missing observations. Differences are smaller in Domains 3 and 4. The comparison demonstrates the need to retain separate flags for reported zeros and missing values throughout normalization and aggregation (see Table 6).

To ensure a missing value is not read as observed poor

performance, the following missing-data protocol is applied to this report.

Minimum coverage threshold: country-domain scores are treated as reportable only where indicator-level missing data fall below 50 percent. This threshold aligns with the Low-confidence classification already used in Table 7.

Exclusion and imputation rule: domains classified Low confidence (more than 50 percent missing) are shown in the tables for transparency but are excluded from cross-country averages and domain rankings; domains classified Medium confidence (20–50 percent missing) are retained as reported, since the pilot sample size does not support reliable imputation at this stage. No missing value is imputed to zero.

Flags for insufficient data: the underlying scored dataset will carry an indicator-level flag distinguishing a reported zero (a genuine "No" response or the minimum observed value under min-max normalization) from a missing value carried into aggregation as zero, so

every zero in Table 6 can be traced to its source. Sensitivity test: because Low-confidence domains are excluded from cross-country averages and rankings under the rule above, the results reported throughout this document already reflect this treatment rather than the unadjusted alternative. Countries with insufficient domain coverage are shown with their available domains

flagged accordingly, rather than compared directly against fully-covered peers on every domain, and their scores should be read with that qualification in mind. Future YAPI rounds should apply the minimum-coverage threshold prospectively, at the point of data collection, rather than retrospectively at the scoring stage.

Table 8: Comparison between actual missing data and Zero in Scores by Domain

	Actual missing (sum of 10 countries)	Zero in scoring (sum of 10 countries)	Difference	Percentage Difference	Inference
Domain 1	7	14	7	50%	High
Domain 2	7	14	7	50%	High
Domain 3	22	24	2	8.3%	Low
Domain 4	12	13	1	7.7%	Low
Domain 5	20	26	6	23.1%	Low
Total	68	91	23	25.3%	Moderate

Note: Rather than a formal significance test on five domain-level counts (too small a sample for a t-test to be statistically meaningful), the table above presents a descriptive reconciliation of actual missing observations against zero-valued scores by domain, to show where the two diverge most.

3.6 Country level strengths and weaknesses

The following summary describes country-level strengths and weaknesses in recorded scores and data completeness by domain. Score comparisons are relative to the five domains and the pilot sample. The data-completeness assessment does not evaluate the accuracy or quality of reported data.

- Egypt stands out in domain 2 and domain 4, while the score for domain 5 remains comparatively weaker. The country reports no missing data across all domains, making it the top-performing country in terms of data completeness.
- Uganda records its strongest results in Domains 1 and 5, while Domains 3 and 4 are weaker. The country reports complete data across all five domains, giving its pilot scores a comparatively strong data-completeness basis.
- Cameroon performs better in domain 1, while scores related to domain 3 and domain 5 lag behind. The country demonstrates strong data completeness across all domains, with missing rates nearing zero. This makes Cameroon one of the strongest-performing pilot countries in terms of data availability, with near-complete reporting across all five domains.
- Eswatini performs relatively better in domain 4, but lower scores in domain 3 and domain 5 point to challenges in translating efforts into broader outcomes. The country shows strong data availability in most domains except Domain 5 where missing data exceeds 40%. All other domains exhibit complete data.
- The Gambia records its strongest score in Domain 2, while Domains 3 and 5 are weaker. It reports complete data across all five domains
- in Table 6, making data completeness a relative strength in the pilot.
- Nigeria records relative strengths in Domains 2 and 4, while Domain 3 is its weakest area. It reports complete data in Domains 1, 2, and 4, a 19 percent missing-data rate in Domain 3, and a 36 percent missing-data rate in Domain 5. Domain 5 should therefore be interpreted with medium confidence.
- Kenya shows solid performance in domain 4 but weaker scores in domain 3. The country shows significant missing rates in domains 1, 2, and 3. The missing rate for Domain 2 is the highest with 82.14% signaling a critical data gap. Domain scores for Domains 1, 2, and 3 should therefore be treated as low-confidence estimates. The strong Domain 4 score (complete data, 0% missing) is the most reliable finding for Kenya in this pilot.
- Côte d'Ivoire shows relatively better performance in domain 1, but weaker results in Domain 5. The country shows moderate to high missing rates in most domains, particularly Domain 3, 4, and 5. This indicates notable gaps and a need for improved data submission.
- Malawi records its strongest score in Domain 4, while Domains 2 and 3 remain areas of concern. Data gaps affect Domains 2, 4, and 5. In particular, Malawi's Domain 4 score, with 58 percent missing data, and Domain 5 score, with 68 percent missing data, should be interpreted with caution. Domains 1 and 3 have complete or near-complete data and carry higher confidence.
- Morocco records its strongest relative score



in Domain 4 but weaker scores in Domains 3 and 5. Missing data affect all five domains, with particularly large gaps in Domains 1, 4, and 5. Domain 4, with 79 percent missing data, and Domain 5, with 68 percent missing data, are low-confidence estimates; Domain 2, with 25 percent missing data, is a medium-confidence estimate.

- Tunisia records its strongest relative score in Domain 4 but weaker scores in Domains 1 and 3. Missing-data rates exceed 50 percent in all five domains: Domain 1 (83 percent), Domain 2 (75 percent), Domain 3 (51 percent), Domain 4 (70 percent), and Domain 5 (68 percent). Tunisia's domain scores should therefore be treated as low-confidence estimates throughout the pilot report.

3.7 Summary of Results

The findings summarised below are subject to the data completeness constraints documented in Section 3.4. For countries and domains with high missing data rates, conclusions should be treated as provisional. The performance patterns described are most reliable for countries with high confidence classifications across multiple domains (Egypt, Uganda, Cameroon, Gambia, and Nigeria in most domains).

Across the eleven YAPI pilot countries, the overall score is approximately 1.55 out of 5 under both weighting approaches. The close alignment indicates limited sensitivity of the aggregate score to these two weighting schemes, although it does not establish the robustness of country rankings or domain classifications. Policy Engagement and Governance, Productive Resources and Services, and Education, Skills and Technology make the largest aggregate contributions. Sustainability and Resilience to Shocks and Economic Opportunities make the smallest contributions. Cross-country dispersion varies by domain.

It is important to note that no single domain operates in isolation. That is, weaknesses in education, finance, and resilience undermine economic opportunities, while governance gains risk stagnation without effective implementation. For policy and practice, the results point to the following priorities: deepening youth skills and mentorship, strengthening enabling services such as finance and advisory systems, strengthening policy implementation, improving the quality of economic

opportunities, and embedding resilience into all youth-focused agrifood interventions. Addressing these interconnected gaps is essential for transforming youth participation into inclusive and sustainable agrifood system development.

Across the pilot countries, Domain 4 frequently records a relatively high contribution, while Domain 3 often records a lower contribution. Data availability is strongest in Domain 1 and weakest in several indicators within Domains 3, 4, and 5. Cameroon, Egypt, The Gambia, and Uganda report consistently high data completeness, whereas Morocco and Tunisia face the largest cross-domain gaps. Addressing these gaps will reduce data-related bias and improve the credibility and representativeness of future results.

Because some missing values are carried into aggregation as zeros, data gaps affect score precision and may also affect score levels and rankings. To address this, Section 3.5 sets out a formal missing-data protocol: domains with more than 50 percent missing data are excluded from cross-country averages and rankings, and every zero score is flagged to distinguish a genuine response from missing data carried into aggregation. Country and domain results should still be interpreted jointly with the data-confidence classifications in Section 3.4, particularly for domains retained at Medium confidence. Future YAPI rounds should apply this minimum-data threshold prospectively, at the point of data collection, rather than retrospectively at the scoring stage.



04

Lessons Learned

The pilot implementation of the Youth in Agrifood Systems Performance Index (YAPI) across eleven Member States provided valuable technical and institutional insights. Beyond the performance results, the process itself revealed important lessons that will inform the scale-up to all 55 AU Member States.

4.1 Challenges in Institutional Coordination

Effective implementation of YAPI requires coordination across multiple ministries and agencies, including agriculture, youth, finance, planning, environment, and national statistics offices. In several pilot countries, coordination mechanisms were either weak or informal, leading to delays in data collection and validation.

Youth-related indicators were often housed in different institutions, with no centralized focal point responsible for aggregation. In some cases, limited clarity on institutional roles and reporting responsibilities created bottlenecks. The pilot demonstrated that successful implementation depends on clearly designated national coordination structures, ideally anchored within the CAADP Biennial Review framework and supported by inter-ministerial technical working groups.

Based on the pilot experience, effective national YAPI coordination requires at least four elements: (i) a designated focal ministry, typically the Ministry of Agriculture or Youth Affairs, responsible for coordinating data collection, managing submissions to the YAPI platform, and liaising with the African Union Commission; (ii) a cross-ministerial technical working group, including representatives of statistics, finance, youth, and other relevant institutions, that meets at least twice during the data-collection cycle; (iii) a clearly defined role for the National Statistics Office in reviewing metadata, methods, and reported data before submission; and (iv) a country-level validation meeting before final data are transmitted to the African Union Commission.

4.2 Gaps in statistical capacity

Significant disparities exist in statistical capacity across Member States. While some countries demonstrated strong data management systems and youth-disaggregated datasets, others faced challenges in accessing up-to-date, reliable, and sector-specific information.

In particular, indicators related to economic opportunities, resilience, climate-smart practices, and youth-led enterprises were often not routinely captured within national statistical systems. The absence of standardized definitions and data collection methodologies further complicated reporting. These capacity gaps highlight the need for strengthened national monitoring and evaluation systems, harmonized data frameworks, and targeted training to support the institutionalization of youth-focused agrifood data. Statistical capacity constraints encountered during the pilot can be grouped into three distinct scenarios, each of which requires a different response:

- i. (i) Data not available: The indicator exists in the YAPI framework, but no national data-collection programme currently generates it. The appropriate response is investment

in targeted surveys, administrative record systems, or integration into existing household or agricultural surveys.

- ii. Data collected but not comparable: countries collect the underlying data, but definitions, reference periods, or units differ across countries and sometimes within a country across years. This would require harmonisation of indicator definitions, data collection protocols, and reference periods, ideally through a common reporting template adopted at AU level.
- iii. Data exist but are inaccessible: Relevant information may be held in administrative registers, ministry records, social-protection databases, or National Statistics Office archives but is not shared with the YAPI coordinating unit in a timely manner. The appropriate response is to establish inter-ministerial data-sharing agreements, formal access protocols, and clear data-governance responsibilities.



4.3 Data entry inconsistencies

The pilot phase revealed inconsistencies in data entry and reporting formats. These included errors in numerator–denominator alignment, incorrect scaling, incomplete metadata documentation, and misinterpretation of indicator definitions.

In some instances, missing data were inadvertently recorded as zero values, potentially distorting performance outcomes. Variations in understanding ratio-based versus yes/no indicators also affected data quality. These inconsistencies underscore the importance of detailed reporting guidelines, automated validation checks within the digital platform, and continuous technical support during data submission.

These data-entry inconsistencies have direct consequences for YAPI scores. As documented in Section 3.5, the scored dataset contains more zero values than genuinely missing observations, partly because incorrectly entered or inconsistently formatted data interact with the normalization and weighting procedures. Improving data-entry accuracy is therefore not merely an administrative concern; it is a prerequisite for credible index results.

4.4 Variation in validation rigour

The rigour of national validation processes varied considerably across pilot countries. Some Member States conducted comprehensive internal reviews, cross-checked data with sectoral agencies, and held national validation workshops prior to submission. Others relied on limited internal consultation or submitted data without extensive cross-verification. Moving forward, the validation processes should be demonstrable, well structured, and inclusive of relevant stakeholders and technical experts. Stronger validation improves data coherence and institutional ownership. The variation observed across countries suggests that future rollouts should apply standardized validation protocols and minimum quality-assurance requirements. Countries aiming to replicate strong validation practice in future YAPI cycles should meet the following minimum standards before submitting data to the African Union Commission:

- i. Completeness check: confirmation that all indicators for which national data exist have been entered, with explicit 'not available' flags for those where data do not yet exist.
- ii. Source documentation: each data point accompanied by a named source (survey title, administrative system, policy document) and reference year.
- iii. Internal consistency check: domain subtotals and individual indicator values cross-checked against the source tables to identify transcription errors.
- iv. Temporal consistency: reference years documented for each indicator, with explanatory notes where multi-year averages or proxies are used.
- v. Formal sign-off: the designated national focal point and a representative of the National Statistical Office jointly confirm the accuracy of the submission before it is transmitted to the African Union Commission.

4.5 Platform usability insights

The introduction of the YAPI digital data collection and reporting platform was an important innovation, and the pilot generated several usability insights. Some users reported challenges with navigation, indicator interpretation, and uploading supporting documentation. Limited embedded guidance and the absence of automated error-detection features contributed to reporting inconsistencies. Connectivity constraints in some contexts also delayed submissions.

Despite these challenges, the platform significantly improved central data aggregation and transparency. Enhancements such as automated validation rules, clearer indicator tooltips, downloadable templates, and integrated data completeness dashboards would further strengthen usability and efficiency during scale-up of the Youth in Agrifood Systems Performance Index (YAPI)

as a diagnostic and planning tool for countries. Platform improvements can be sequenced into three phases:

Short-term (to be addressed before the next BR cycle): introduce mandatory-field flags to prevent incomplete submissions; add range-check prompts that alert data entrants when a value falls outside an expected or previously reported range; include embedded guidance notes explaining the definition, measurement unit, and recommended data source for each indicator; and create a completeness dashboard visible to both the national focal point/members state, region and the AUC so that data gaps can be tracked in real time during the collection window.

Medium-term (for full YAPI scale-up): develop offline



data entry capability with automatic synchronization when connectivity is restored, to address challenges in countries with unreliable internet access; build a country-facing performance dashboard that allows national teams to visualize their own preliminary scores against the pilot average; and introduce a document-upload function so countries can attach source files or administrative records alongside their numeric submissions.

Long-term: develop an advanced analytics dashboard that supports evidence-based policy planning and targeting of interventions at the national level, enabling Member States to identify priority domains, track progress over time, and align YAPI findings with national agrifood systems strategies. This phase also ensures full ownership and institutionalization of YAPI at the country level, embedding it within national statistical and planning systems as a routine monitoring instrument rather than a one-off pilot exercise.



05

Recommendations

The recommendations below are organized by primary actor and implementation timeframe. Immediate actions should be completed before the next CAADP Biennial Review cycle; medium-term actions are expected to take one to three years; and long-term actions require sustained commitment beyond the immediate BR cycle. The YAPI pilot demonstrates that youth empowerment in agrifood systems requires coordinated, system-wide interventions rather than isolated employment initiatives. While progress is evident in policy-engagement frameworks, significant gaps remain in implementation capacity, economic inclusion, resilience, and data systems. The following recommendations are proposed to accelerate progress toward the Kampala Declaration target of empowering at least 30 percent of youth in agrifood value chains by 2035.

5.1 African Union Commission- Immediate

At the continental level, it is recommended that the African Union Commission consider integrating YAPI into the CAADP Biennial Review process as an instrument for monitoring youth empowerment in agrifood systems, subject to technical validation and formal approval through the appropriate AU governance channels. Institutionalizing YAPI within existing

continental accountability mechanisms will ensure policy continuity, comparability across Member States, and alignment with the broader agrifood systems transformation agenda. In parallel, harmonized data standards and reporting templates should be adopted to strengthen consistency in youth-disaggregated agrifood systems data collection across countries.

5.2 African Union Commission- Medium to Long Term

The African Union Commission, working with Regional Economic Communities, development partners, and technical institutions, should support capacity building for YAPI implementation, facilitate peer learning among Member States, and invest in further enhancement

of the digital reporting platform. Automated validation tools, user-friendly dashboards, and real-time data-completeness monitoring will improve reporting efficiency and reliability during scale-up.

5.3 Regional Economic Communities

Regional Economic Communities should facilitate peer learning and cross-country exchange among Member States on YAPI implementation, data collection, and youth in agrifood systems policy design. The RECs are

well placed to harmonize regional data standards and coordinate multi-country capacity building efforts in collaboration with the AUC and national focal points.

5.4 Member States

At the national level, Member States should establish or strengthen inter-ministerial coordination mechanisms to oversee youth agrifood system performance. Effective implementation requires collaboration across agriculture, youth, finance, education, environment, and national statistical offices. Clear designation of national YAPI focal points, supported by technical working groups, will enhance accountability and reduce fragmentation in reporting.

To improve youth economic outcomes, Member States should prioritize expanding access to productive assets and enabling services. Secure land rights, irrigation, mechanization, renewable energy, and affordable

finance are foundational for youth-led agribusiness growth. At the same time, advisory and extension systems must be modernized to incorporate digital tools and climate-smart approaches, ensuring that young agripreneurs can compete in increasingly dynamic markets.

The near absence of structured mentorship programmes across pilot countries signals a critical gap in intergenerational knowledge transfer and enterprise incubation. Governments and partners should institutionalize mentorship, apprenticeship, and incubation schemes within agrifood value chains, linking youth to experienced producers, private sector actors,



and innovation hubs.

Given the consistently low performance in sustainability and resilience, resilience-building measures must be mainstreamed into all youth-focused agrifood

interventions. Expanding access to climate information services, promoting climate-smart agricultural practices, and increasing uptake of agricultural insurance will be essential to safeguard youth livelihoods against environmental and market shocks.

5.5 National Statistical Offices

National statistical offices, working with sector ministries and national YAPI focal points, should strengthen youth-disaggregated agrifood databases, integrate priority YAPI indicators into routine administrative and survey systems, and improve digital data-management infrastructure. Addressing current gaps, particularly in economic opportunities and resilience, will improve the credibility and policy relevance of future assessments.

Ultimately, empowering youth in agrifood systems requires moving beyond policy formulation toward sustained implementation, institutional accountability, and targeted investment. By strengthening coordination, improving data systems, expanding economic opportunities, and embedding resilience into agrifood transformation strategies, Member States can translate demographic potential into tangible dividends for inclusive and sustainable development outcomes.

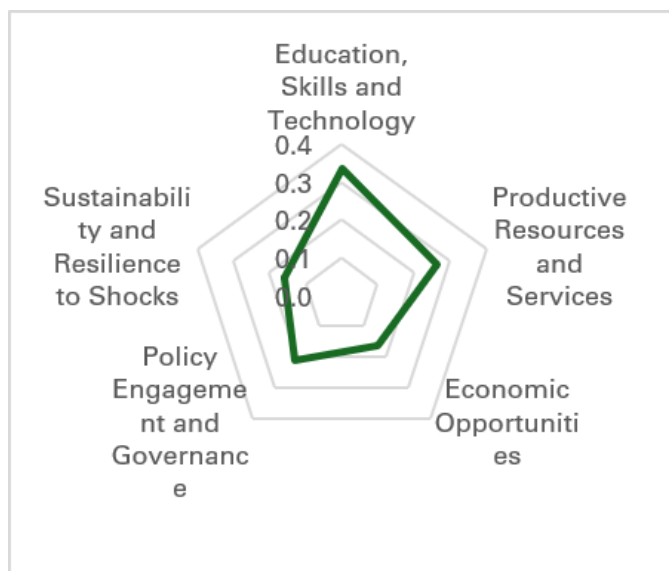




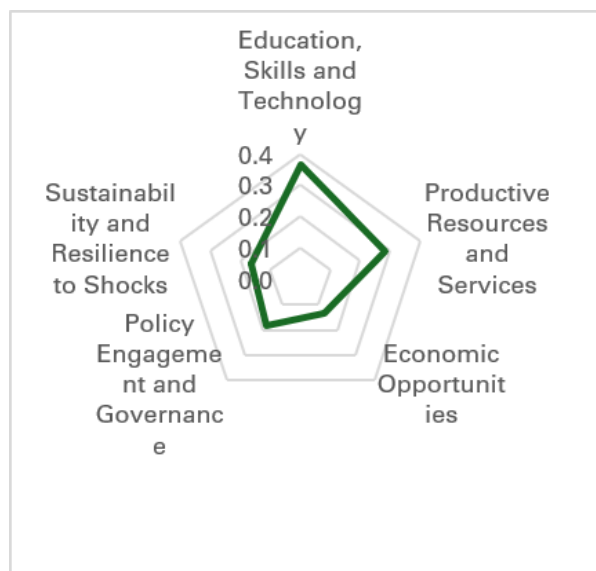
Appendix

Annex 1: Country scores by domain and weighting approaches

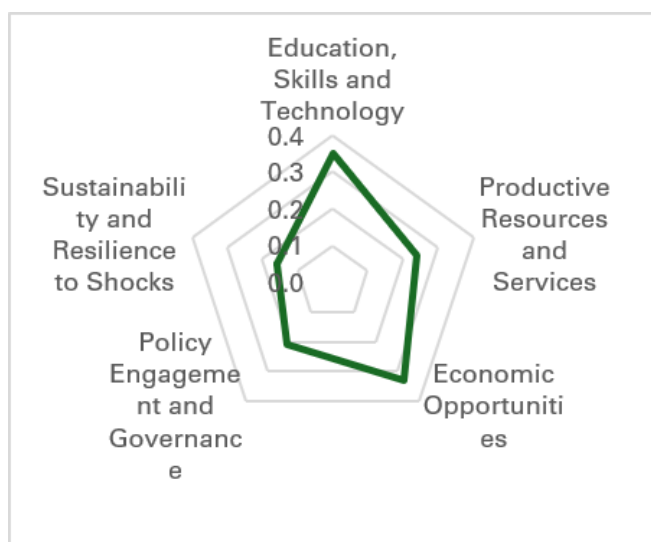
Cameroon–Equal Weight



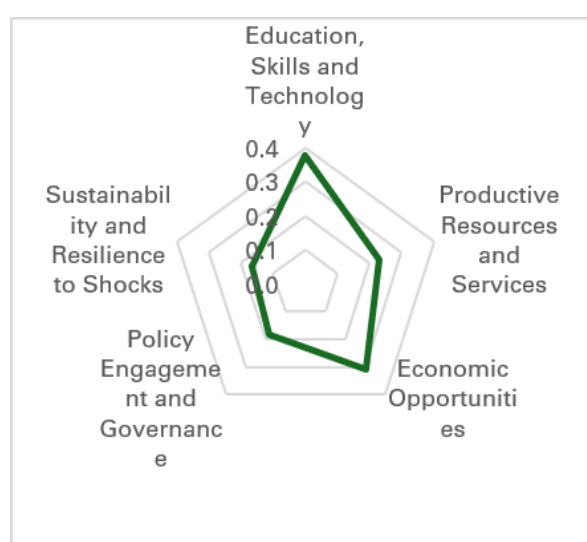
Cameroon–Expert Weight



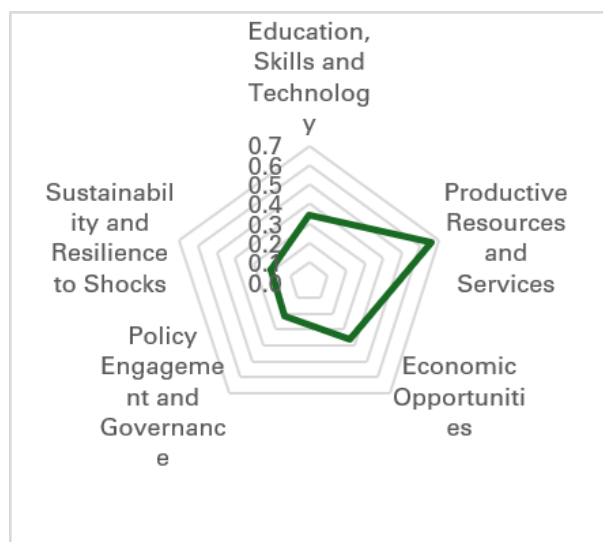
Cote D'Ivoire–Equal Weight



Cote D'Ivoire–Expert Weight



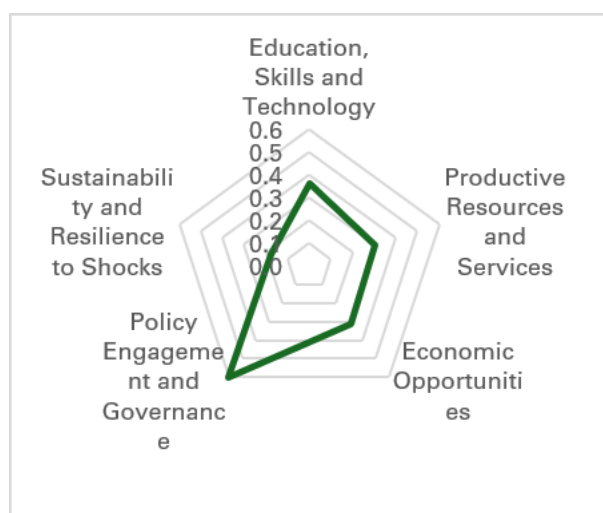
Egypt–Equal Weight



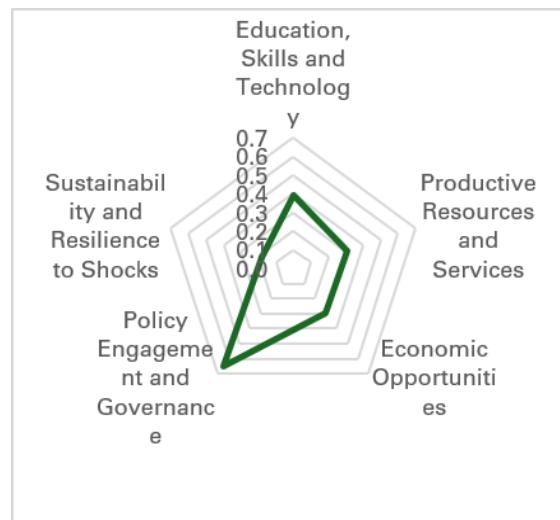
Egypt–Expert Weight



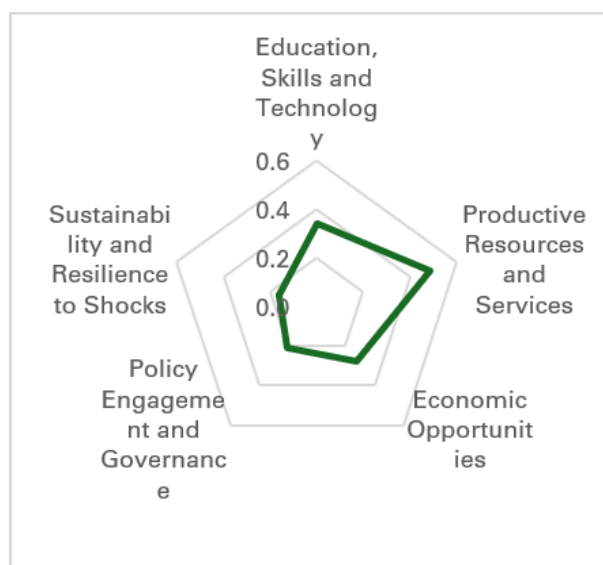
Eswatini–Equal Weight



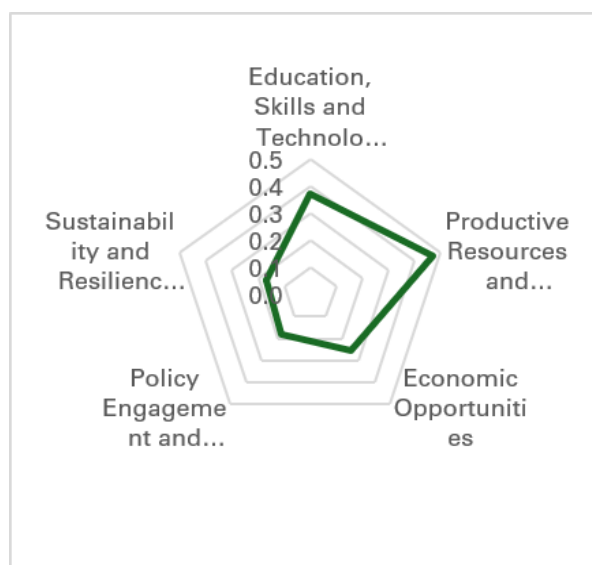
Eswatini–Expert Weight



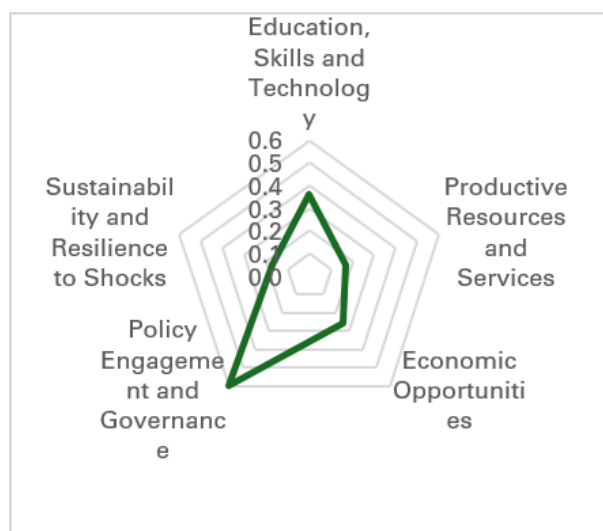
Gambia–Equal Weight



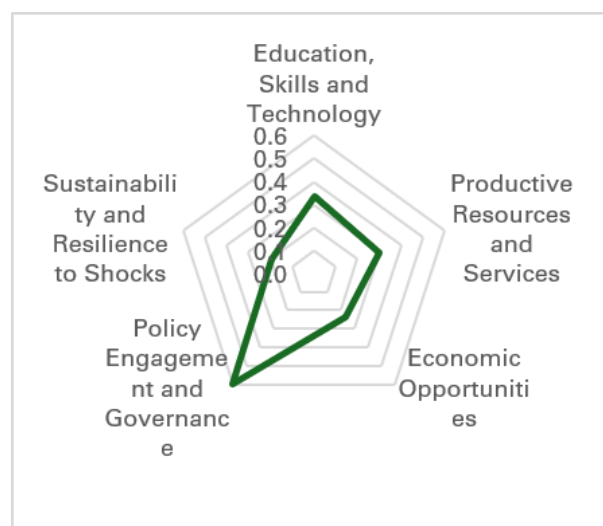
Gambia–Expert Weight



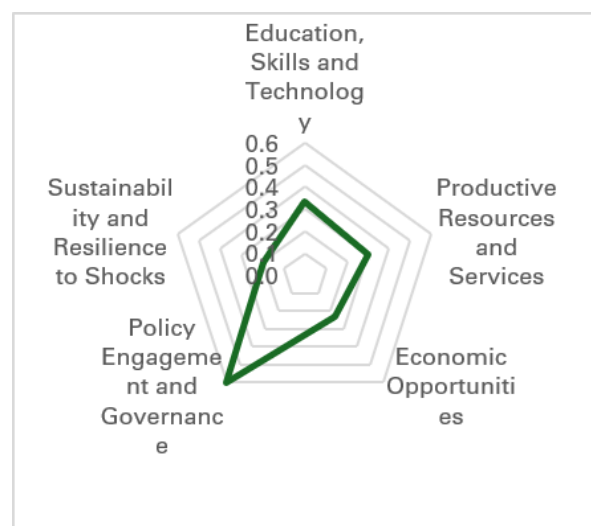
Kenya–Equal Weight



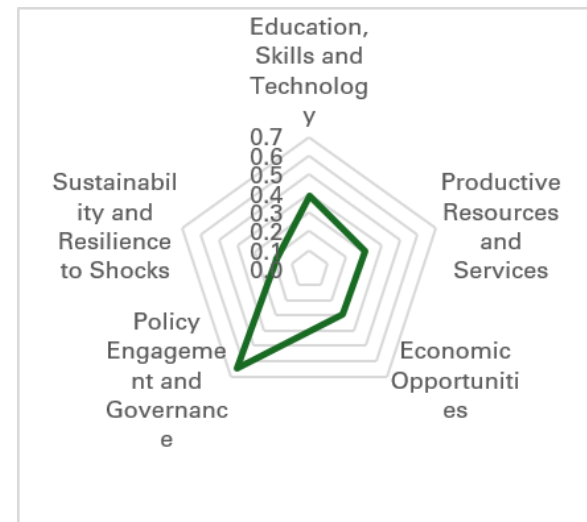
Kenya–Expert Weight



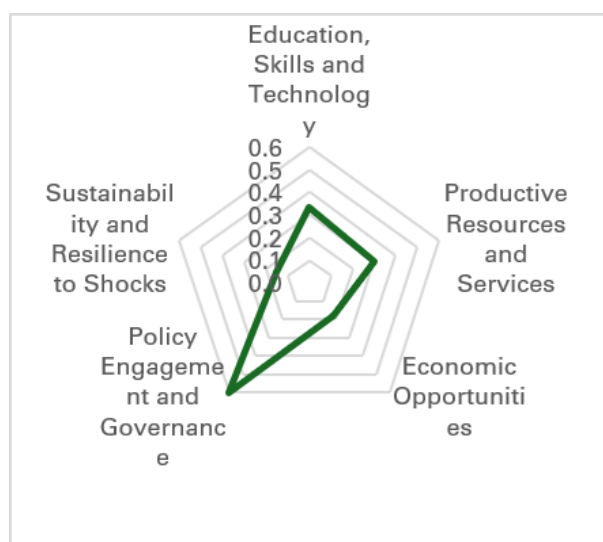
Malawi–Equal Weight



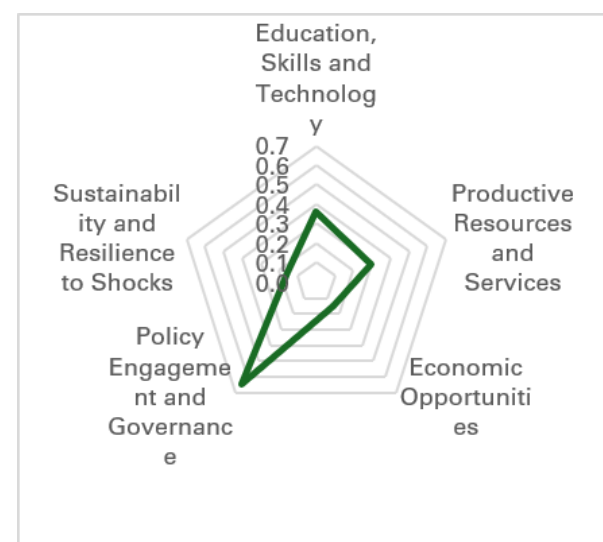
Malawi–Expert Weight



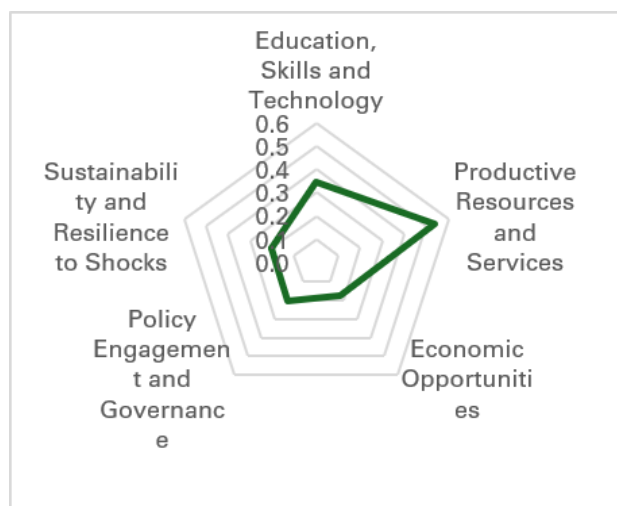
Morocco–Equal Weight



Morocco–Expert Weight



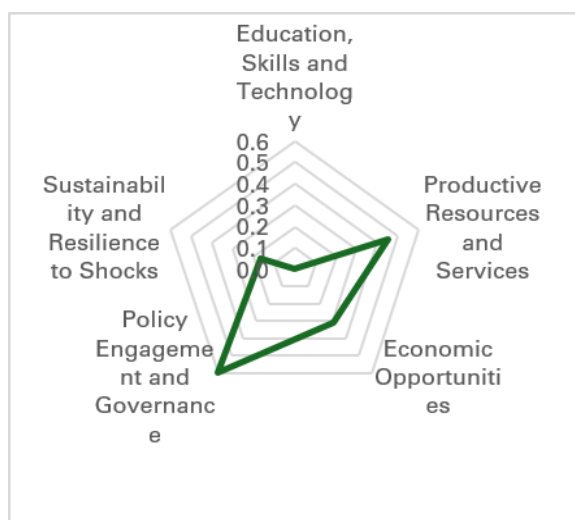
Nigeria–Equal Weight



Nigeria–Expert Weight



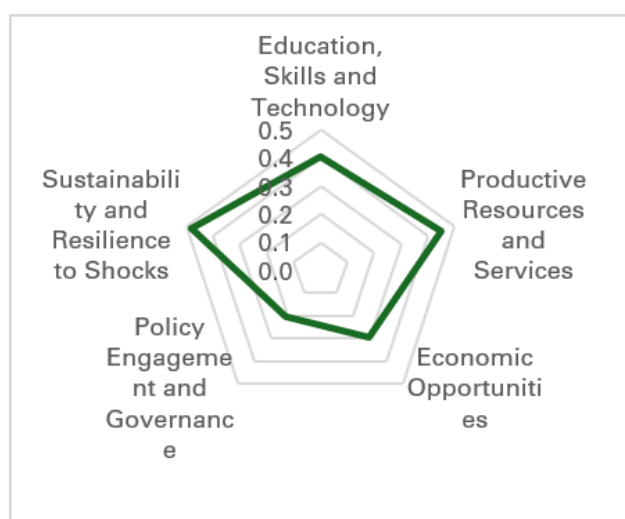
Tunisia–Equal Weight



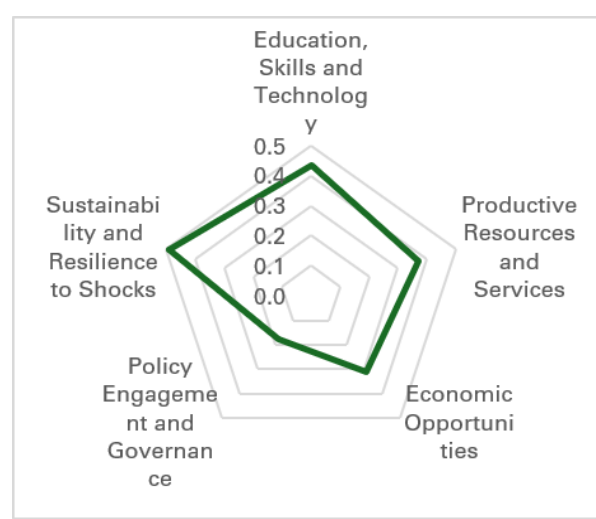
Tunisia–Expert Weight



Uganda–Equal Weight



Uganda–Expert Weight





Annex 2: Summary of all YAPI Results

Pilot Countries (Aggregate)

Construct / Indicator	YAPI by Equal Weight	YAPI by Expert Weight
EDUCATION, SKILLS & TECHNOLOGY	0.319	0.345
1. Proportion of youth completing Agrifood TVET	0.303	0.329
2. Proportion of youth in agrifood systems that use digital agritechnology	0.016	0.016
3. Proportion of youth on agrifood systems institutionalized mentorship programme	0.000	0.000
PRODUCTIVE RESOURCES AND SERVICES	0.379	0.357
1. Proportion of youth with access and secure rights to land	0.053	0.059
2. Proportion of youth with access to public or private irrigation	0.031	0.031
3. Proportion of youth with access to improved agricultural inputs	0.056	0.020
4. Proportion of youth with access to financial services	0.070	0.087
5. Proportion of youth with access to advisory/business service and information	0.104	0.104
6. Proportion of youth with use of mechanization	0.042	0.040
7. Proportion of youth with access to affordable energy	0.021	0.015
ECONOMIC OPPORTUNITIES	0.262	0.245
1. Proportion of new jobs for youth in agrifood systems	0.053	0.058
2. Proportion of youth-led agrifood systems startups	0.020	0.022
3. Proportion of agrifood systems startups sustained	0.019	0.018
4. Proportion of SMEs with market access	0.037	0.036
5. Proportion of youth with access to incentives/instruments	0.011	0.012
6. Existence of decent jobs for youth in agrifood systems	0.014	0.015
7. Existence of incentives for private sector to hire youth	0.109	0.085
POLICY ENGAGEMENT AND GOVERNANCE	0.386	0.395
1. Existence of evidence-based youth policy	0.092	0.095
2. Youth participation in policymaking/dialogues	0.092	0.110
3. Youth leadership in agrifood systems cooperatives/orgs	—	—
4. Youth involvement in agrifood systems governance	0.092	0.096
5. Proportion of youth-led agrifood systems policies implemented	0.109	0.094



Construct / Indicator	YAPI by Equal Weight	YAPI by Expert Weight
SUSTAINABILITY AND RESILIENCE TO SHOCKS	0.202	0.211
1. Proportion of youths employed in agrifood systems	0.139	0.146
2. Proportion of youths adopting climate-smart practices	0.006	0.007
3. Proportion of youths resilient to market shocks	0.036	0.036
4. Proportion of youths resilient to climatic events	0.014	0.014
5. Proportion of youths resilient to extreme events	0.002	0.002
6. Proportion of youths using climate information	0.005	0.005
7. Proportion of youths with insurance in agrifood systems	0.000	0.000
Overall Score	1.549	1.553

Summary of YAPI Result for Cameroon

Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
EDUCATION, SKILLS & TECHNOLOGY	0.034	0.170	0.366
1. Proportion of youth completing Agrifood TVET	0.034	0.170	0.362
2. Proportion of youth in agrifood systems that use digital agritechology	0.000	0.000	0.004
3. Proportion of youth on agrifood systems institutionalized mentorship programme	0.000	0.000	0.000
PRODUCTIVE RESOURCES AND SERVICES	0.063	0.315	0.282
1. Proportion of youth with access and secure rights to land	0.034	0.170	0.157
2. Proportion of youth with access to public or private irrigation	0.000	0.000	0.001
3. Proportion of youth with access to improved agricultural inputs	0.011	0.055	0.048
4. Proportion of youth with access to financial services	0.006	0.030	0.030
5. Proportion of youth with access to advisory/business service and information	0.009	0.045	0.036
6. Proportion of youth with use of mechanization	0.000	0.000	0.000
7. Proportion of youth with access to affordable energy	0.003	0.015	0.010
ECONOMIC OPPORTUNITIES	0.039	0.195	0.133
1. Proportion of new jobs for youth in agrifood systems	0.000	0.000	0.000
2. Proportion of youth-led agrifood systems startups	0.000	0.000	0.000
3. Proportion of agrifood systems startups sustained	0.000	0.000	0.000
4. Proportion of SMEs with market access	0.005	0.025	0.020
5. Proportion of youth with access to incentives/instruments	0.000	0.000	0.000



Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
6. Existence of decent jobs for youth in agrifood systems	0.000	0.000	0.001
7. Existence of incentives for private sector to hire youth	0.034	0.170	0.112
POLICY ENGAGEMENT AND GOVERNANCE	0.036	0.180	0.186
1. Existence of evidence-based youth policy	0.001	0.005	0.004
2. Youth participation in policymaking/ dialogues	0.001	0.005	0.005
3. Youth leadership in agrifood systems cooperatives/orgs	0.000	0.000	0.000
4. Youth involvement in agrifood systems governance	0.001	0.005	0.004
5. Proportion of youth-led agrifood systems policies implemented	0.034	0.170	0.173
SUSTAINABILITY AND RESILIENCE TO SHOCKS	0.038	0.190	0.165
1. Proportion of youths employed in agrifood systems	0.034	0.170	0.150
2. Proportion of youths adopting climate-smart practices	0.000	0.000	0.001
3. Proportion of youths resilient to market shocks	0.002	0.010	0.011
4. Proportion of youths resilient to climatic events	0.000	0.000	0.002
5. Proportion of youths resilient to extreme events	0.000	0.000	0.001
6. Proportion of youths using climate information	0.000	0.000	0.001
7. Proportion of youths with insurance in agrifood systems	0.000	0.000	0.000
Overall Score	0.210	1.050	1.132

Summary of YAPI Result for Cote D'Ivoire

Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
EDUCATION, SKILLS & TECHNOLOGY	0.036	0.180	0.378
1. Proportion of youth completing Agrifood TVET	0.034	0.170	0.362
2. Proportion of youth in agrifood systems that use digital agritechnology	0.002	0.010	0.016
3. Proportion of youth on agrifood systems institutionalized mentorship programme	0.000	0.000	0.000
PRODUCTIVE RESOURCES AND SERVICES	0.057	0.285	0.232
1. Proportion of youth with access and secure rights to land	0.000	0.000	0.000
2. Proportion of youth with access to public or private irrigation	0.004	0.020	0.016
3. Proportion of youth with access to improved agricultural inputs	0.004	0.020	0.017



Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
4. Proportion of youth with access to financial services	0.000	0.000	0.001
5. Proportion of youth with access to advisory/business service and information	0.015	0.075	0.062
6. Proportion of youth with use of mechanization	0.034	0.170	0.135
7. Proportion of youth with access to affordable energy	0.000	0.000	0.000
ECONOMIC OPPORTUNITIES	0.078	0.390	0.307
1. Proportion of new jobs for youth in agrifood systems	0.000	0.000	0.000
2. Proportion of youth-led agrifood systems startups	0.034	0.170	0.155
3. Proportion of agrifood systems startups sustained	0.010	0.050	0.039
4. Proportion of SMEs with market access	0.000	0.000	0.000
5. Proportion of youth with access to incentives/instruments	0.000	0.000	0.000
6. Existence of decent jobs for youth in agrifood systems	0.000	0.000	0.001
7. Existence of incentives for private sector to hire youth	0.034	0.170	0.112
POLICY ENGAGEMENT AND GOVERNANCE	0.035	0.175	0.181
1. Existence of evidence-based youth policy	0.000	0.000	0.002
2. Youth participation in policymaking/dialogues	0.000	0.000	0.003
3. Youth leadership in agrifood systems cooperatives/orgs	0.000	0.000	0.000
4. Youth involvement in agrifood systems governance	0.000	0.000	0.002
5. Proportion of youth-led agrifood systems policies implemented	0.034	0.170	0.173
SUSTAINABILITY AND RESILIENCE TO SHOCKS	0.038	0.190	0.167
1. Proportion of youths employed in agrifood systems	0.034	0.170	0.150
2. Proportion of youths adopting climate-smart practices	0.001	0.005	0.004
3. Proportion of youths resilient to market shocks	0.003	0.015	0.013
4. Proportion of youths resilient to climatic events	0.000	0.000	0.000
5. Proportion of youths resilient to extreme events	0.000	0.000	0.000
6. Proportion of youths using climate information	0.000	0.000	0.000
7. Proportion of youths with insurance in agrifood systems	0.000	0.000	0.000
Overall Score	0.244	1.220	1.264



Summary of YAPI Result for Egypt

Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
EDUCATION, SKILLS & TECHNOLOGY	0.035	0.175	0.370
1. Proportion of youth completing Agrifood TVET	0.034	0.170	0.362
2. Proportion of youth in agrifood systems that use digital agritechnology	0.001	0.005	0.008
3. Proportion of youth on agrifood systems institutionalized mentorship programme	0.000	0.000	0.000
PRODUCTIVE RESOURCES AND SERVICES	0.157	0.785	0.602
1. Proportion of youth with access and secure rights to land	0.034	0.170	0.157
2. Proportion of youth with access to public or private irrigation	0.023	0.115	0.096
3. Proportion of youth with access to improved agricultural inputs	0.026	0.130	0.017
4. Proportion of youth with access to financial services	0.025	0.125	0.132
5. Proportion of youth with access to advisory/business service and information	0.030	0.150	0.128
6. Proportion of youth with use of mechanization	0.018	0.090	0.072
7. Proportion of youth with access to affordable energy	0.000	0.000	0.000
ECONOMIC OPPORTUNITIES	0.085	0.425	0.324
1. Proportion of new jobs for youth in agrifood systems	0.008	0.040	0.037
2. Proportion of youth-led agrifood systems startups	0.000	0.000	0.000
3. Proportion of agrifood systems startups sustained	0.034	0.170	0.137
4. Proportion of SMEs with market access	0.009	0.045	0.036
5. Proportion of youth with access to incentives/instruments	0.000	0.000	0.001
6. Existence of decent jobs for youth in agrifood systems	0.000	0.000	0.001
7. Existence of incentives for private sector to hire youth	0.034	0.170	0.112
POLICY ENGAGEMENT AND GOVERNANCE	0.036	0.180	0.186
1. Existence of evidence-based youth policy	0.001	0.005	0.004
2. Youth participation in policymaking/ dialogues	0.001	0.005	0.005
3. Youth leadership in agrifood systems cooperatives/orgs	0.000	0.000	0.000
4. Youth involvement in agrifood systems governance	0.001	0.005	0.004
5. Proportion of youth-led agrifood systems policies implemented	0.034	0.170	0.173



Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
SUSTAINABILITY AND RESILIENCE TO SHOCKS	0.049	0.245	0.215
1. Proportion of youths employed in agrifood systems	0.034	0.170	0.150
2. Proportion of youths adopting climate-smart practices	0.000	0.000	0.001
3. Proportion of youths resilient to market shocks	0.015	0.075	0.064
4. Proportion of youths resilient to climatic events	0.000	0.000	0.000
5. Proportion of youths resilient to extreme events	0.000	0.000	0.000
6. Proportion of youths using climate information	0.000	0.000	0.000
7. Proportion of youths with insurance in agrifood systems	0.000	0.000	0.000
Overall Score	0.362	1.810	1.698

Summary of YAPI Result for Eswatini

Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
EDUCATION, SKILLS & TECHNOLOGY	0.037	0.185	0.389
1. Proportion of youth completing Agrifood TVET	0.034	0.170	0.362
2. Proportion of youth in agrifood systems that use digital agritechnology	0.003	0.015	0.027
3. Proportion of youth on agrifood systems institutionalized mentorship programme	0.000	0.000	0.000
PRODUCTIVE RESOURCES AND SERVICES	0.073	0.365	0.308
1. Proportion of youth with access and secure rights to land	0.013	0.065	0.060
2. Proportion of youth with access to public or private irrigation	0.000	0.000	0.000
3. Proportion of youth with access to improved agricultural inputs	0.006	0.030	0.017
4. Proportion of youth with access to financial services	0.009	0.045	0.049
5. Proportion of youth with access to advisory/business service and information	0.034	0.170	0.143
6. Proportion of youth with use of mechanization	0.009	0.045	0.035
7. Proportion of youth with access to affordable energy	0.001	0.005	0.004
ECONOMIC OPPORTUNITIES	0.075	0.375	0.298
1. Proportion of new jobs for youth in agrifood systems	0.034	0.170	0.156
2. Proportion of youth-led agrifood systems startups	0.000	0.000	0.000
3. Proportion of agrifood systems startups sustained	0.000	0.000	0.000



Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
4. Proportion of SMEs with market access	0.007	0.035	0.028
5. Proportion of youth with access to incentives/instruments	0.000	0.000	0.001
6. Existence of decent jobs for youth in agrifood systems	0.000	0.000	0.001
7. Existence of incentives for private sector to hire youth	0.034	0.170	0.112
POLICY ENGAGEMENT AND GOVERNANCE	0.102	0.510	0.650
1. Existence of evidence-based youth policy	0.034	0.170	0.205
2. Youth participation in policymaking/ dialogues	0.034	0.170	0.238
3. Youth leadership in agrifood systems cooperatives/orgs	0.000	0.000	0.000
4. Youth involvement in agrifood systems governance	0.034	0.170	0.207
5. Proportion of youth-led agrifood systems policies implemented	—	—	—
SUSTAINABILITY AND RESILIENCE TO SHOCKS	0.042	0.210	0.183
1. Proportion of youths employed in agrifood systems	0.034	0.170	0.150
2. Proportion of youths adopting climate-smart practices	0.001	0.005	0.003
3. Proportion of youths resilient to market shocks	0.004	0.020	0.016
4. Proportion of youths resilient to climatic events	0.003	0.015	0.011
5. Proportion of youths resilient to extreme events	0.000	0.000	0.000
6. Proportion of youths using climate information	0.001	0.005	0.002
7. Proportion of youths with insurance in agrifood systems	0.000	0.000	0.001
Overall Score	0.328	1.640	1.828

Summary of YAPI Result for The Gambia

Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
EDUCATION, SKILLS & TECHNOLOGY	0.035	0.175	0.372
1. Proportion of youth completing Agrifood TVET	0.034	0.170	0.362
2. Proportion of youth in agrifood systems that use digital agritechnology	0.001	0.005	0.010
3. Proportion of youth on agrifood systems institutionalized mentorship programme	0.000	0.000	0.000
PRODUCTIVE RESOURCES AND SERVICES	0.115	0.575	0.471
1. Proportion of youth with access and secure rights to land	0.016	0.080	0.072



Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
2. Proportion of youth with access to public or private irrigation	0.008	0.040	0.036
3. Proportion of youth with access to improved agricultural inputs	0.017	0.085	0.017
4. Proportion of youth with access to financial services	0.034	0.170	0.177
5. Proportion of youth with access to advisory/business service and information	0.032	0.160	0.133
6. Proportion of youth with use of mechanization	0.009	0.045	0.036
7. Proportion of youth with access to affordable energy	0.000	0.000	0.000
ECONOMIC OPPORTUNITIES	0.066	0.330	0.258
1. Proportion of new jobs for youth in agrifood systems	0.024	0.120	0.110
2. Proportion of youth-led agrifood systems startups	0.004	0.020	0.019
3. Proportion of agrifood systems startups sustained	0.001	0.005	0.003
4. Proportion of SMEs with market access	0.003	0.015	0.014
5. Proportion of youth with access to incentives/instruments	0.000	0.000	0.000
6. Existence of decent jobs for youth in agrifood systems	0.000	0.000	0.000
7. Existence of incentives for private sector to hire youth	0.034	0.170	0.112
POLICY ENGAGEMENT AND GOVERNANCE	0.035	0.175	0.181
1. Existence of evidence-based youth policy	0.000	0.000	0.003
2. Youth participation in policymaking/dialogues	0.000	0.000	0.003
3. Youth leadership in agrifood systems cooperatives/orgs	0.000	0.000	0.000
4. Youth involvement in agrifood systems governance	0.000	0.000	0.003
5. Proportion of youth-led agrifood systems policies implemented	0.034	0.170	0.173
SUSTAINABILITY AND RESILIENCE TO SHOCKS	0.039	0.195	0.170
1. Proportion of youths employed in agrifood systems	0.034	0.170	0.150
2. Proportion of youths adopting climate-smart practices	0.000	0.000	0.001
3. Proportion of youths resilient to market shocks	0.004	0.020	0.017
4. Proportion of youths resilient to climatic events	0.000	0.000	0.001
5. Proportion of youths resilient to extreme events	0.000	0.000	0.001
6. Proportion of youths using climate information	0.000	0.000	0.000



Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
7. Proportion of youths with insurance in agrifood systems	0.000	0.000	0.000
Overall Score	0.291	1.455	1.452

Summary of YAPI Result for Kenya

Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
EDUCATION, SKILLS & TECHNOLOGY	0.037	0.185	0.392
1. Proportion of youth completing Agrifood TVET	0.034	0.170	0.362
2. Proportion of youth in agrifood systems that use digital agritechology	0.003	0.015	0.030
3. Proportion of youth on agrifood systems institutionalized mentorship programme	0.000	0.000	0.000
PRODUCTIVE RESOURCES AND SERVICES	0.040	0.200	0.190
1. Proportion of youth with access and secure rights to land	0.000	0.000	0.000
2. Proportion of youth with access to public or private irrigation	0.000	0.000	0.000
3. Proportion of youth with access to improved agricultural inputs	0.000	0.000	0.017
4. Proportion of youth with access to financial services	0.003	0.015	0.015
5. Proportion of youth with access to advisory/business service and information	0.034	0.170	0.143
6. Proportion of youth with use of mechanization	0.004	0.020	0.014
7. Proportion of youth with access to affordable energy	0.000	0.000	0.000
ECONOMIC OPPORTUNITIES	0.060	0.300	0.265
1. Proportion of new jobs for youth in agrifood systems	—	—	—
2. Proportion of youth-led agrifood systems startups	—	—	—
3. Proportion of agrifood systems startups sustained	—	—	—
4. Proportion of SMEs with market access	—	—	—
5. Proportion of youth with access to incentives/instruments	0.026	0.130	0.114
6. Existence of decent jobs for youth in agrifood systems	0.034	0.170	0.151
7. Existence of incentives for private sector to hire youth	0.000	0.000	0.000
POLICY ENGAGEMENT AND GOVERNANCE	0.102	0.510	0.650
1. Existence of evidence-based youth policy	0.034	0.170	0.205
2. Youth participation in policymaking/dialogues	0.034	0.170	0.238



Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
3. Youth leadership in agrifood systems cooperatives/orgs	0.000	0.000	0.000
4. Youth involvement in agrifood systems governance	0.034	0.170	0.207
5. Proportion of youth-led agrifood systems policies implemented	0.000	0.000	0.000
SUSTAINABILITY AND RESILIENCE TO SHOCKS	0.040	0.200	0.177
1. Proportion of youths employed in agrifood systems	0.034	0.170	0.150
2. Proportion of youths adopting climate-smart practices	0.001	0.005	0.004
3. Proportion of youths resilient to market shocks	0.002	0.010	0.010
4. Proportion of youths resilient to climatic events	0.002	0.010	0.009
5. Proportion of youths resilient to extreme events	0.000	0.000	0.000
6. Proportion of youths using climate information	0.001	0.005	0.004
7. Proportion of youths with insurance in agrifood systems	0.000	0.000	0.000
Overall Score	0.280	1.400	1.674

Summary of YAPI Result for Malawi

Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
EDUCATION, SKILLS & TECHNOLOGY	0.034	0.170	0.363
1. Proportion of youth completing Agrifood TVET	0.034	0.170	0.362
2. Proportion of youth in agrifood systems that use digital agritechnology	0.000	0.000	0.001
3. Proportion of youth on agrifood systems institutionalized mentorship programme	0.000	0.000	0.000
PRODUCTIVE RESOURCES AND SERVICES	0.071	0.355	0.329
1. Proportion of youth with access and secure rights to land	0.000	0.000	0.000
2. Proportion of youth with access to public or private irrigation	0.010	0.050	0.043
3. Proportion of youth with access to improved agricultural inputs	0.004	0.020	0.017
4. Proportion of youth with access to financial services	0.034	0.170	0.177
5. Proportion of youth with access to advisory/business service and information	0.017	0.085	0.069
6. Proportion of youth with use of mechanization	0.004	0.020	0.017
7. Proportion of youth with access to affordable energy	0.001	0.005	0.004



Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
ECONOMIC OPPORTUNITIES	0.056	0.280	0.237
1. Proportion of new jobs for youth in agrifood systems	0.034	0.170	0.156
2. Proportion of youth-led agrifood systems startups	0.005	0.025	0.021
3. Proportion of agrifood systems startups sustained	0.004	0.020	0.017
4. Proportion of SMEs with market access	0.000	0.000	0.000
5. Proportion of youth with access to incentives/instruments	0.000	0.000	0.001
6. Existence of decent jobs for youth in agrifood systems	0.000	0.000	0.001
7. Existence of incentives for private sector to hire youth	0.012	0.060	0.041
POLICY ENGAGEMENT AND GOVERNANCE	0.102	0.510	0.650
1. Existence of evidence-based youth policy	0.034	0.170	0.205
2. Youth participation in policymaking/ dialogues	0.034	0.170	0.238
3. Youth leadership in agrifood systems cooperatives/orgs	0.000	0.000	0.000
4. Youth involvement in agrifood systems governance	0.034	0.170	0.207
5. Proportion of youth-led agrifood systems policies implemented	—	—	—
SUSTAINABILITY AND RESILIENCE TO SHOCKS	0.046	0.230	0.202
1. Proportion of youths employed in agrifood systems	0.034	0.170	0.150
2. Proportion of youths adopting climate-smart practices	0.000	0.000	0.000
3. Proportion of youths resilient to market shocks	0.012	0.060	0.052
4. Proportion of youths resilient to climatic events	0.000	0.000	0.000
5. Proportion of youths resilient to extreme events	0.000	0.000	0.000
6. Proportion of youths using climate information	0.000	0.000	0.000
7. Proportion of youths with insurance in agrifood systems	0.000	0.000	0.000
Overall Score	0.309	1.545	1.781



Summary of YAPI Result for Morocco

Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
EDUCATION, SKILLS & TECHNOLOGY	0.034	0.170	0.362
1. Proportion of youth completing Agrifood TVET	0.034	0.170	0.362
2. Proportion of youth in agrifood systems that use digital agritechnology	0.000	0.000	0.000
3. Proportion of youth on agrifood systems institutionalized mentorship programme	0.000	0.000	0.000
PRODUCTIVE RESOURCES AND SERVICES	0.071	0.355	0.292
1. Proportion of youth with access and secure rights to land	0.010	0.050	0.044
2. Proportion of youth with access to public or private irrigation	0.001	0.005	0.005
3. Proportion of youth with access to improved agricultural inputs	0.006	0.030	0.017
4. Proportion of youth with access to financial services	0.000	0.000	0.000
5. Proportion of youth with access to advisory/business service and information	0.034	0.170	0.143
6. Proportion of youth with use of mechanization	0.020	0.100	0.081
7. Proportion of youth with access to affordable energy	0.000	0.000	0.001
ECONOMIC OPPORTUNITIES	0.043	0.215	0.149
1. Proportion of new jobs for youth in agrifood systems	0.000	0.000	0.000
2. Proportion of youth-led agrifood systems startups	0.000	0.000	0.000
3. Proportion of agrifood systems startups sustained	0.000	0.000	0.000
4. Proportion of SMEs with market access	0.008	0.040	0.035
5. Proportion of youth with access to incentives/instruments	0.000	0.000	0.000
6. Existence of decent jobs for youth in agrifood systems	0.000	0.000	0.002
7. Existence of incentives for private sector to hire youth	0.034	0.170	0.112
POLICY ENGAGEMENT AND GOVERNANCE	0.102	0.510	0.650
1. Existence of evidence-based youth policy	0.034	0.170	0.205
2. Youth participation in policymaking/ dialogues	0.034	0.170	0.238
3. Youth leadership in agrifood systems cooperatives/orgs	0.000	0.000	0.000
4. Youth involvement in agrifood systems governance	0.034	0.170	0.207
5. Proportion of youth-led agrifood systems policies implemented	—	—	—



Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
SUSTAINABILITY AND RESILIENCE TO SHOCKS	0.036	0.180	0.157
1. Proportion of youths employed in agrifood systems	0.034	0.170	0.150
2. Proportion of youths adopting climate-smart practices	0.000	0.000	0.000
3. Proportion of youths resilient to market shocks	0.002	0.010	0.007
4. Proportion of youths resilient to climatic events	0.000	0.000	0.000
5. Proportion of youths resilient to extreme events	0.000	0.000	0.000
6. Proportion of youths using climate information	0.000	0.000	0.000
7. Proportion of youths with insurance in agrifood systems	0.000	0.000	0.000
Overall Score	0.286	1.430	1.609

Summary of YAPI Result for Nigeria

Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
EDUCATION, SKILLS & TECHNOLOGY	0.035	0.175	0.373
1. Proportion of youth completing Agrifood TVET	0.034	0.170	0.362
2. Proportion of youth in agrifood systems that use digital agritechnology	0.001	0.005	0.011
3. Proportion of youth on agrifood systems institutionalized mentorship programme	0.000	0.000	0.000
PRODUCTIVE RESOURCES AND SERVICES	0.128	0.640	0.431
1. Proportion of youth with access and secure rights to land	0.032	0.160	0.149
2. Proportion of youth with access to public or private irrigation	0.000	0.000	0.001
3. Proportion of youth with access to improved agricultural inputs	0.034	0.170	0.017
4. Proportion of youth with access to financial services	0.023	0.115	0.120
5. Proportion of youth with access to advisory/business service and information	0.023	0.115	0.097
6. Proportion of youth with use of mechanization	0.000	0.000	0.000
7. Proportion of youth with access to affordable energy	0.015	0.075	0.045
ECONOMIC OPPORTUNITIES	0.041	0.205	0.143
1. Proportion of new jobs for youth in agrifood systems	0.000	0.000	0.001
2. Proportion of youth-led agrifood systems startups	0.000	0.000	0.000



Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
3. Proportion of agrifood systems startups sustained	0.000	0.000	0.000
4. Proportion of SMEs with market access	0.007	0.035	0.028
5. Proportion of youth with access to incentives/instruments	0.000	0.000	0.000
6. Existence of decent jobs for youth in agrifood systems	0.000	0.000	0.002
7. Existence of incentives for private sector to hire youth	0.034	0.170	0.112
POLICY ENGAGEMENT AND GOVERNANCE	0.035	0.175	0.180
1. Existence of evidence-based youth policy	0.000	0.000	0.002
2. Youth participation in policymaking/ dialogues	0.000	0.000	0.002
3. Youth leadership in agrifood systems cooperatives/orgs	0.000	0.000	0.000
4. Youth involvement in agrifood systems governance	0.000	0.000	0.002
5. Proportion of youth-led agrifood systems policies implemented	0.034	0.170	0.173
SUSTAINABILITY AND RESILIENCE TO SHOCKS	0.048	0.240	0.212
1. Proportion of youths employed in agrifood systems	0.034	0.170	0.150
2. Proportion of youths adopting climate-smart practices	0.002	0.010	0.007
3. Proportion of youths resilient to market shocks	0.010	0.050	0.040
4. Proportion of youths resilient to climatic events	0.000	0.000	0.000
5. Proportion of youths resilient to extreme events	0.000	0.000	0.001
6. Proportion of youths using climate information	0.003	0.015	0.013
7. Proportion of youths with insurance in agrifood systems	0.000	0.000	0.000
Overall Score	0.288	1.440	1.337

Summary of YAPI Result for Tunisia

Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
EDUCATION, SKILLS & TECHNOLOGY	0.000	0.000	0.000
1. Proportion of youth completing Agrifood TVET	0.000	0.000	0.000
2. Proportion of youth in agrifood systems that use digital agritechnology	0.000	0.000	0.000
3. Proportion of youth on agrifood systems institutionalized mentorship programme	0.000	0.000	0.000
PRODUCTIVE RESOURCES AND SERVICES	0.108	0.540	0.415



Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
1. Proportion of youth with access and secure rights to land	0.001	0.005	0.006
2. Proportion of youth with access to public or private irrigation	0.020	0.100	0.085
3. Proportion of youth with access to improved agricultural inputs	0.020	0.100	0.017
4. Proportion of youth with access to financial services	0.027	0.135	0.143
5. Proportion of youth with access to advisory/business service and information	0.034	0.170	0.143
6. Proportion of youth with use of mechanization	0.005	0.025	0.021
7. Proportion of youth with access to affordable energy	0.000	0.000	0.000
ECONOMIC OPPORTUNITIES	0.072	0.360	0.274
1. Proportion of new jobs for youth in agrifood systems	0.004	0.020	0.019
2. Proportion of youth-led agrifood systems startups	0.000	0.000	0.000
3. Proportion of agrifood systems startups sustained	0.000	0.000	0.000
4. Proportion of SMEs with market access	0.034	0.170	0.142
5. Proportion of youth with access to incentives/instruments	0.000	0.000	0.000
6. Existence of decent jobs for youth in agrifood systems	0.000	0.000	0.002
7. Existence of incentives for private sector to hire youth	0.034	0.170	0.112
POLICY ENGAGEMENT AND GOVERNANCE	0.102	0.510	0.650
1. Existence of evidence-based youth policy	0.034	0.170	0.205
2. Youth participation in policymaking/ dialogues	0.034	0.170	0.238
3. Youth leadership in agrifood systems cooperatives/orgs	0.000	0.000	0.000
4. Youth involvement in agrifood systems governance	0.034	0.170	0.207
5. Proportion of youth-led agrifood systems policies implemented	0.000	0.000	0.000
SUSTAINABILITY AND RESILIENCE TO SHOCKS	0.040	0.200	0.176
1. Proportion of youths employed in agrifood systems	0.034	0.170	0.150
2. Proportion of youths adopting climate-smart practices	0.000	0.000	0.000
3. Proportion of youths resilient to market shocks	0.006	0.030	0.026
4. Proportion of youths resilient to climatic events	0.000	0.000	0.000
5. Proportion of youths resilient to extreme events	0.000	0.000	0.000



Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
6. Proportion of youths using climate information	0.000	0.000	0.000
7. Proportion of youths with insurance in agrifood systems	0.000	0.000	0.000
Overall Score	0.323	1.615	1.515

Summary of YAPI Result for Uganda

Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
EDUCATION, SKILLS & TECHNOLOGY	0.041	0.205	0.435
1. Proportion of youth completing Agrifood TVET	0.034	0.170	0.362
2. Proportion of youth in agrifood systems that use digital agritechnology	0.007	0.035	0.073
3. Proportion of youth on agrifood systems institutionalized mentorship programme	0.000	0.000	0.000
PRODUCTIVE RESOURCES AND SERVICES	0.107	0.535	0.372
1. Proportion of youth with access and secure rights to land	0.000	0.000	0.000
2. Proportion of youth with access to public or private irrigation	0.015	0.075	0.065
3. Proportion of youth with access to improved agricultural inputs	0.018	0.090	0.017
4. Proportion of youth with access to financial services	0.021	0.105	0.112
5. Proportion of youth with access to advisory/business service and information	0.012	0.060	0.051
6. Proportion of youth with use of mechanization	0.006	0.030	0.026
7. Proportion of youth with access to affordable energy	0.034	0.170	0.102
ECONOMIC OPPORTUNITIES	0.070	0.350	0.313
1. Proportion of new jobs for youth in agrifood systems	0.034	0.170	0.156
2. Proportion of youth-led agrifood systems startups	0.010	0.050	0.047
3. Proportion of agrifood systems startups sustained	0.000	0.000	0.002
4. Proportion of SMEs with market access	0.023	0.115	0.097
5. Proportion of youth with access to incentives/instruments	0.002	0.010	0.010
6. Existence of decent jobs for youth in agrifood systems	0.000	0.000	0.001
7. Existence of incentives for private sector to hire youth	0.000	0.000	0.000
POLICY ENGAGEMENT AND GOVERNANCE	0.035	0.175	0.180
1. Existence of evidence-based youth policy	0.000	0.000	0.002



Construct / Indicator	YAPI by Equal Weight	Equal Weight Rescaled x5	YAPI by Expert Weight
2. Youth participation in policymaking/ dialogues	0.000	0.000	0.002
3. Youth leadership in agrifood systems cooperatives/orgs	0.000	0.000	0.000
4. Youth involvement in agrifood systems governance	0.000	0.000	0.002
5. Proportion of youth-led agrifood systems policies implemented	0.034	0.170	0.173
SUSTAINABILITY AND RESILIENCE TO SHOCKS	0.114	0.570	0.492
1. Proportion of youths employed in agrifood systems	0.024	0.120	0.107
2. Proportion of youths adopting climate-smart practices	0.012	0.060	0.057
3. Proportion of youths resilient to market shocks	0.034	0.170	0.144
4. Proportion of youths resilient to climatic events	0.030	0.150	0.129
5. Proportion of youths resilient to extreme events	0.005	0.025	0.018
6. Proportion of youths using climate information	0.008	0.040	0.036
7. Proportion of youths with insurance in agrifood systems	0.000	0.000	0.000
Overall Score	0.368	1.840	1.791





Annex 3: YAPI Domains, Indicators, and Data Parameters

Domain	Indicator	Measurement		Data parameter
Domain 1	Proportion of youth completing AgriTVET in agrifood system related fields	Ratio	Numerator	Total number of youth who have completed formal training programmes (TVET & Degree) in the agrifood system related fields
			Denominator	Total number of youth who have completed formal training programmes (TVET & Degree) in any field
	Proportion of youth in agrifood system that use digital technology	Ratio	Numerator	Number of youth in agrifood system that use of digital technology (e.g., precision agriculture)
			Denominator	Total number of youth engaged in agrifood system (this is sum of employed and business owners)
	Proportion of youth on Agrifood system institutionalized mentorship programme	Ratio	Numerator	Total number of youth (15-34 years) in mentorship positions in the ministry of agriculture
			Denominator	Total Number of youth employed in agrifood system
Domain 2	Proportion of youth with land access and secure rights	Ratio	Numerator	Access to land (ownership) and land security
			Denominator	Total number of youth engaged in agrifood system
	Total number of youth engaged in agrifood system with access to irrigation facilities	Ratio	Numerator	Proportion of the youth with access to public or private irrigation facilities
			Denominator	Total Number of youth engaged in agrifood system
	Proportion of youth with access to improved inputs	Ratio	Numerator	Total number of youth with access to improved inputs
			Denominator	Total Number of youth engaged in agrifood system
	Proportion of youth with access to financial services (%)	Ratio	Numerator	Number of youth in agrifood system with access to financial services
			Denominator	Total number of youth engaged in agrifood system (this is sum of employed and business owners)
	Proportion of youth with access to advisory services (%)	Ratio	Numerator	Number of youth access to advisory/business services
			Denominator	Total number of youth engaged in agrifood system (this is sum of employed and business owners)
	Proportion of youth with access to mechanization services (%)	Ratio	Numerator	Number of youth access to mechanization services
			Denominator	Total number of youth engaged in agrifood system (this is sum of employed and business owners)
	Proportion of youth with access to renewable energy (%)	Ratio	Numerator	Number of youth access to renewable energy
			Denominator	Total number of youth engaged in agrifood system (this is sum of employed and business owners)



Domain	Indicator	Measurement		Data parameter
	Proportion of new jobs for youth in agrifood system (%)	Ratio	Numerator	Number of new jobs created for youth (15-34 years) in the agrifood systems
			Denominator	Total number of new jobs (employment) created for youth (15-34 years) in the economy
	Proportion of youth-led agrifood systems startups (%)	Ratio	Numerator	Total number of newly registered agrifood systems- based SMEs /startups
			Denominator	Number of new jobs created for youth (15-34 years) in the agrifood systems
Domain 3	Proportion of agrifood systems startups sustained (%)	Ratio	Numerator	Total of startups that continued to operate for at least a period of 24 months for youth (15-34 years)
			Denominator	Total number of newly registered agrifood systems- based SMEs /startups
	Proportion of SMEs with market access (%)	Ratio	Numerator	Total number of youth agri- enterprises accessing the agrifood system markets
			Denominator	Total number of youth-owned enterprises in agrifood systems
	Proportion of youth with access to incentives/ instruments	Ratio	Numerator	Total number of youth in agrifood system
			Denominator	Number of youth with agrifood systems-related incentives and instruments
	Existence of decent jobs for youth in agrifood system	Yes/No	Yes=1, No=0	Existence of fair wages
			Yes=1, No=0	Existence of safe and secure working conditions
			Yes=1, No=0	Existence of access to social protection
			Yes=1, No=0	Existence of respect for labour rights
			Yes=1, No=0	Existence of opportunity for skill development
			Yes=1, No=0	Existence of conducive environment for meaningful participation in decision-making process
	Incentives for private sector to hire youth	Yes/No	Yes=1, No=0	Existence of an incentive structure for the private sector about employment of youths in agrifood systems
Domain 4	Youth participation in policymaking/dialogues	Yes/No	Yes=1, No=0	Youth participation in policymaking/dialogues
	Youth leadership in agrifood system cooperatives/ organizations	Yes/No	Yes=1, No=0	Youth leadership in agrifood system cooperatives/organizations
	Youth involvement in agrifood system governance	Yes/No	Yes=1, No=0	Youth involvement in agrifood system governance
	Proportion of youth-led agrifood system policies implemented	Ratio	Numerator	Number of youth-led agrifood systems policy proposals/recommendations that that have been implemented
			Denominator	Number of youth-led agrifood-system policy proposals or recommendations that had been adopted
Domain 5	Proportion of youths adopting climate-smart practices	Ratio	Numerator	Number of youth that have adopted sustainable and climate smart agricultural practices
			Denominator	Total number of youth engaged in agrifood systems (eligible youth population, aged 15–34)
	Proportion of youths resilient to market shocks	Ratio	Proxy variable	Coefficient of variation



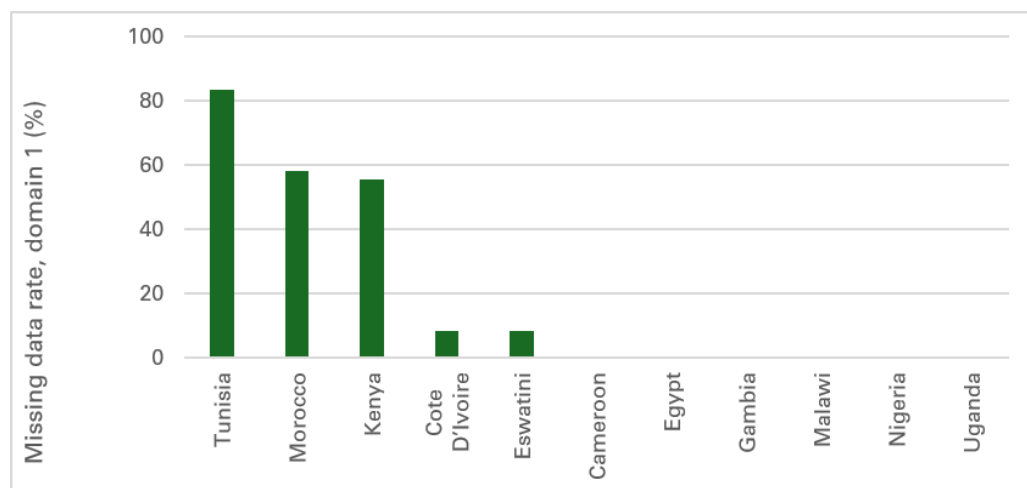
Domain	Indicator	Measurement		Data parameter
	Proportion of youths resilient to climatic events	Ratio	Numerator	Total number of youth in the agrifood systems that have been affected (negatively) by extreme climatic and related events
			Denominator	Total number of youth in agrifood system
	Proportion of youths resilient to extreme events	Ratio	Numerator	Youth in the agrifood systems that have been affected by conflict events (war, pandemics)
			Denominator	Total number of youth in agrifood system
	Proportion of youths using climate information	Ratio	Numerator	Youth using climate information in their decision-making
			Denominator	Total number of youth in agrifood system
	Proportion of youths with insurance in agrifood system	Ratio	Numerator	Number of youth with insurance in agrifood systems
			Denominator	Total number of youth in agrifood system





Annex 4: Missing Data Rates by Domain

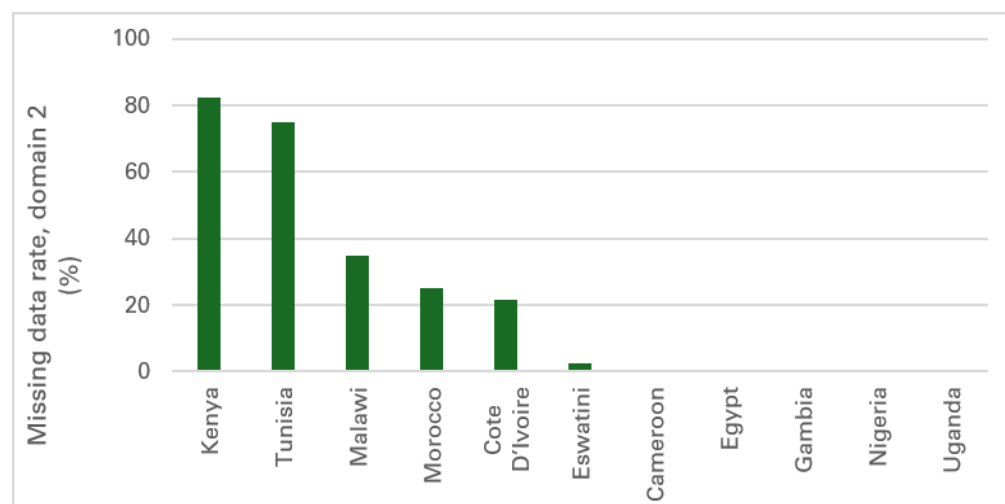
Annex Figure 4.1: Missing data rate for domain 1- Education, Skills and Technology (%)



Source: Authors' calculations based on YAPI pilot data.

Domain 1 records the highest overall data completeness. Cameroon, Egypt, The Gambia, Malawi, Nigeria, and Uganda report complete data, while Tunisia (83 percent), Morocco (58 percent), and Kenya (56 percent) show substantial gaps (Annex Figure 4.1).

Annex Figure 4.2: Missing Data Rate for Domain 2- Productive Resources and Services (%)

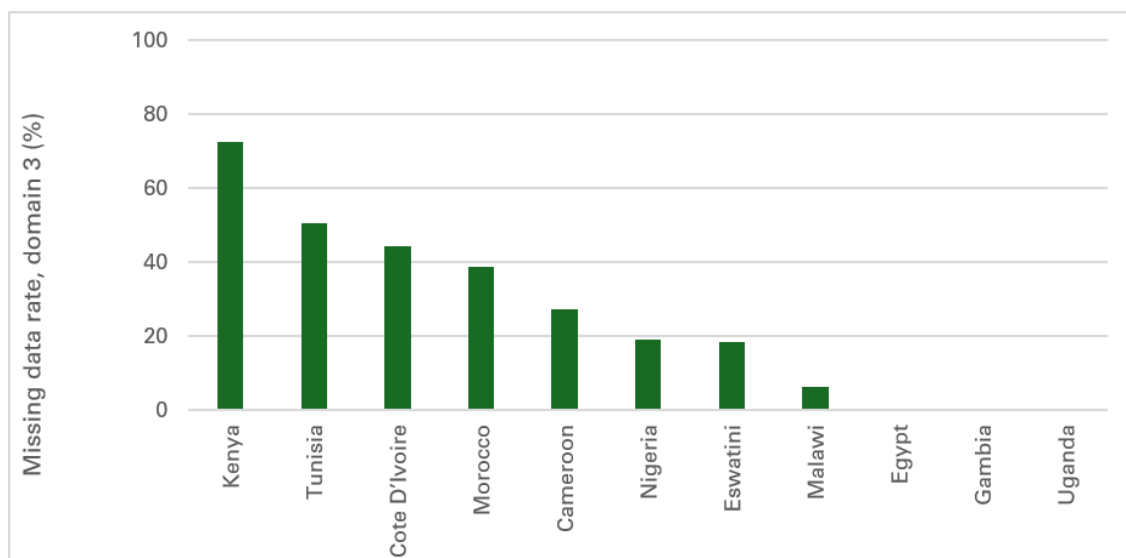


Source: Authors' calculations based on YAPI pilot data.

Performance in Domain 2 is more mixed. While several countries including Cameroon, Egypt, Gambia, Nigeria, and Uganda maintain full data coverage, others face substantial gaps. Kenya (82%) and Tunisia (75%) show particularly high missing rates (Annex Figure 4.2).



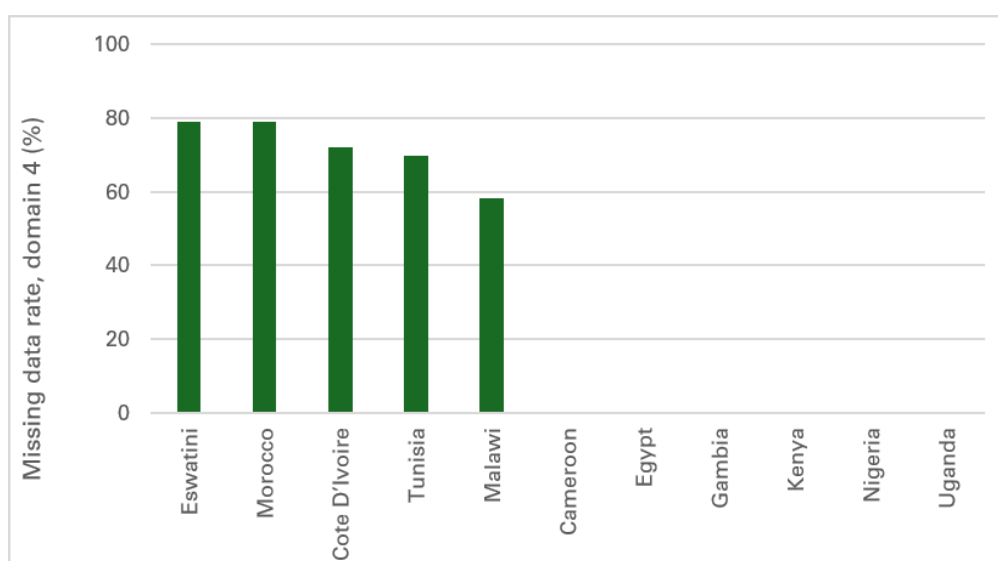
Annex Figure 4.3: Missing Data Rate for Domain 3- Economic Opportunities (%)



Source: Authors' calculations based on YAPI pilot data.

Missing-data rates are more pronounced in Domain 3, particularly in Kenya (73 percent), Tunisia (51 percent), Côte d'Ivoire (44 percent), and Morocco (39 percent) (Annex Figure 4.3).

Annex Figure 4.4: Missing Data Rate for Domain 4- Policy Engagement and Governance (%)

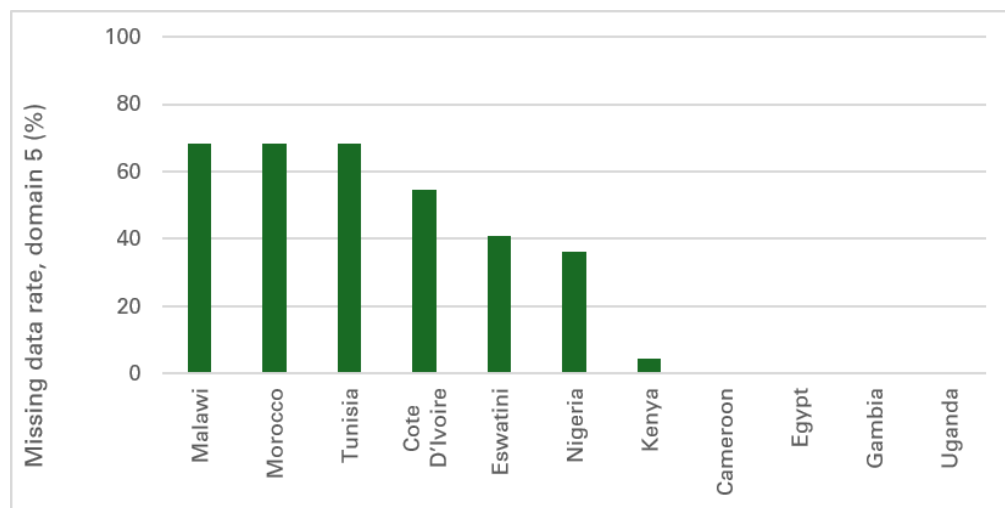


Source: Authors' calculations based on YAPI pilot data.

Domain 4 also suffers from substantial data gaps, with Eswatini (79%), Morocco (79%), Côte d'Ivoire (72%), Tunisia (70%), and Malawi (58%) all exhibiting missing rates above 50 percent. By contrast, Cameroon, Egypt, Gambia, Kenya, Nigeria, and Uganda provide complete or near-complete data (Annex Figure 4.4).



Annex Figure 4.5: Missing Data Rate for Domain 5- Sustainability and Resilience to Shocks (%)



Source: Authors' calculations based on YAPI pilot data.

Domain 5 presents the most challenging missing data landscape. Although Cameroon, Egypt, Gambia, and Uganda report complete data, several countries, including Malawi, Morocco, Tunisia (all at 68%), Côte d'Ivoire (54%), Eswatini (41%), and Nigeria (36%), show persistently high missing rates (Annex Figure 4.5).





Annex 5: Weighting Methodology and Normalization

To make the data series comparable, the raw data were converted to a common range. The min-max linear transformation assigns 100 to the best observed score and 1 to the worst observed score for continuous indicators. This avoids zeros in the normalized continuous scores. Zero values can still arise from binary indicators reported as 'No' and from missing values assigned zero during aggregation. A zero should therefore be accompanied by a flag that distinguishes a substantive response from missing information.

For every individual variable, we define whether high values influence performance positively or negatively, and hence, assign 100 points either to the highest score (e.g. accessibility) or to the lowest (e.g. high pollution). The points are calculated according to the following formula:

$$y_{q,i} = 99 \times \left[\frac{x_{q,i} - \min(x_q)}{\max(x_q) - \min(x_q)} \right] + 1$$

$y_{q,i}$ = normalized value of category q and country i

$x_{q,i}$ = raw data value of category q and country i

$\min(x_q)$ = minimum raw data value of category q within the sample

$\max(x_q)$ = maximum raw data value of category q within the sample

Example:

Raw data value [any unit]	1 (lowest value in sample)	12 (random value in sample)	20 (highest value in sample)
Normalised value [1-100]	$99 \times [(1-1)/(20-1)] + 1 = 1$	$99 \times [(12-1)/(20-1)] + 1 = 58$	$99 \times [(20-1)/(20-1)] + 1 = 100$

Index Aggregation Methodology

Generally, index aggregation depends on whether indicators are substitutable (compensatory) or non-substitutable (non-compensatory). Additive aggregation methods, such as the simple arithmetic mean are commonly used for substitutable indicators. For non-substitutable indicators, non-linear methods, such as multiplicative functions or the Multicriteria Analysis (MCA) are preferred (OGL-UK, 2024; Gibari, Gómez, & Ruiz, 2019; Greco et al., 2019; Mendoza et al., 2009; UK Department for Communities and Local Government, 2009; OECD, 2008). While the linear aggregation method is useful when all sub-indicators have the same measurement unit, geometric aggregation is better

suited to non-comparable and strictly positive sub-indicators expressed in different ratio-scales.

Because the YAPI indicators are normalized to a common scale and the pilot assumes compensability among indicators, linear aggregation is a possible approach. Its use, however, should be justified explicitly and applied consistently with the composite-index formula reported elsewhere in the document.

Summarily, the domain index j is the weighted arithmetic average of variable indicators i within cluster j .

$$DI_j = \sum_{i=1}^{i=n} w_i V_{ji}, j = 1, 2, \dots, 5$$

where V_{ji} = normalized score assigned to indicator i within cluster j , and w_i is weight assigned to indicator i . An important property of the min-max method is that all scores are relative to the observed range within the pilot sample of 11 countries. A country that scores 100 on an indicator has the highest reported value among the 11 pilot countries, not necessarily the highest possible value in absolute terms. As more countries are added to YAPI, the minimum and maximum values will change, which will shift all normalised scores. Country scores from the pilot phase should therefore not be directly compared with scores from future YAPI rounds unless the same sample bounds are applied or scores are rebased.

The pilot adopts weighted arithmetic aggregation for the composite index, consistent with the compensability assumption stated in Section 2.2: domain scores are treated as substitutable, so a shortfall in one domain can be offset by strength in another. Geometric aggregation, which limits compensability for weak domains, was considered (see below) but not adopted for this pilot

For this reason, geometric aggregation is specified as follows:

$$YAPI_i = \prod_{q=1}^Q DI_{q,i}^{w_q}$$

where V_{ji} = normalized score assigned to indicator i within cluster j , and w_i is weight assigned to indicator i . An important property of the min-max method is that all scores are relative to the observed range within the pilot sample of 11 countries. A country that scores 100 on



an indicator has the highest reported value among the 11 pilot countries, not necessarily the highest possible value in absolute terms. As more countries are added to YAPI, the minimum and maximum values will change, which will shift all normalised scores. Country scores from the pilot phase should therefore not be directly compared with scores from future YAPI rounds unless the same sample bounds are applied or scores are rebased.

The pilot adopts weighted arithmetic aggregation for the composite index, consistent with the compensability assumption stated in Section 2.2: domain scores are treated as substitutable, so a shortfall in one domain can be offset by strength in another. Geometric aggregation,

which limits compensability for weak domains, was considered (see below) but not adopted for this pilot

For this reason, geometric aggregation is specified as follows:

$$YAPI_i = \prod_{q=1}^Q DI_{q,i}^{w_q}$$

Example:

Domain	Education, Skills & Technology	Productive Resources & Services	Economic Opportunities	Policy Engagement & Governance	Sustainability & Resilience
Weight	0.29	0.26	0.24	0.05	0.17
Normalised value of country ($y_{q,i}$)	0.3	0.4	0.5	0.6	0.4
Index value of country	$(0.30.29) \times (0.40.26) \times (0.50.24) \times (0.60.05) \times (0.40.17) = 0.421$				

Equal Weighting (EW), also known as ‘attributes-based weighting system’ is the easiest and most common practice in constructing composite indices. It assigns same weights to all indicators, assuming that they were carefully selected and are internally consistent and valid. (Note: equal weighting does not mean no weighting, but rather reflects the case in which all variables are “worth” the same in the composite.) However, EW could disguise the absence of statistical or empirical basis, e.g., insufficient knowledge of causal relationships or a lack of consensus on the alternative (OECD, 2008). Moreover, where indicators are grouped into components that further aggregate into the composite, like the YAPI domains, EW could result in an unbalanced structure in the composite.

Statistical models could be used to group indicators into sub-indicators. Common examples include PCA/FA, BOD, and UCM.

The PCA/FA exploratory analysis method follows the steps below (OECD, 2008):

1. Calculate the covariance/correlation matrix: if the correlation between individual indicators is small, it is unlikely that they share common factors.
2. Identify the number of factors necessary to represent the data and the method for calculating them. In standard practice, factors chosen: (i) have associated eigenvalues larger than one; (ii) contribute individually to the explanation of overall variance by more than 10%; and (iii) contribute cumulatively to the explanation of the overall variance by more than 60%.
3. Rotate factors to enhance their interpretability (by maximizing loading of individual indicators

on individual factors).

4. Construct the weights from the matrix of factor loadings after rotation—the square of factor loadings represents the share of the total unit variance of the indicator explained by the factor.

The weight assigned to an indicator or sub index is derived from the factor loadings and variance using the following equation (Gan et al., 2017; Greco et al., 2019; OECD, 2008):

$$\omega_i = r_j(l_{ij}^2/E_j), i = 1, \dots, m; j = 1, \dots, n$$

where r_j is the proportion of the explained variance of factor j (or the intermediate composite j) in the data set, l_{ij} the factor loading of the i th indicator on factor j and E_j the variance explained by the factor j .

If the YAPI data set has intermediate composites, they are aggregated by assigning a weight to each one of them equal to the proportion of the explained variance. Different extraction methods for principal components, i.e., Maximum Likelihood (ML) or Principal Components (PC), produce different weights, hence different composite scores (and, possibly, different country rankings). Index builders therefore need to carefully evaluate the extraction methods when using the PCA/FA approach.

The PCA/FA approach is frequently used in composite indicators produced by large organizations (e.g., the Business Climate Indicator and General Indicator of Science and Technology) and can be found in several studies in the literature (see Greco et al., 2019). It reduces the risk of double weighting and classifies ungrouped indicators. However, the use of PCA/FA is infeasible in certain cases, where either negative weight



is assigned (e.g., the Environmental Sustainability Index) or correlation among the indicators is very low (e.g., synthetic indices). Beyond elicitation of weights, PCA can be useful for selecting variables to include in a composite index that can adequately explain variations in the data (see Greco et al., 2019). This could enable the developer to better understand the dimensionality of the considered phenomenon or the structure of the selected indicators.

Despite their popularity and convenience, their use presents a few issues. The main weakness of applying the PCA/FA approach to index building is its unpredictable dimensions, and weights that may differ from reality (Gan et al., 2017). First, their application assumes the existence of continuous indicators and a linear relationship among them. Where these do not hold, the non-linear PCA (a.k.a., categorical PCA—CATPCA) is suggested (see Greyling and Tregenna 2016, p. 893, cited in Greco et al., 2019). Second, the statistical properties of the data define their nature and philosophy, which can be seen as both an advantage and a drawback. On the one hand, the reductionism could be useful in cases vulnerable to ‘double counting;’ conversely, PCA/FA might fail if indicators are not correlated or variation is very small.

Moreover, the weights assigned endogenously by PCA/FA do not necessarily correspond to the actual linkages among the indicators, particularly statistical ones (Saisana and Tarantola 2002). Therefore, one should be cautious about how to interpret these weights and especially about the extent to which one might use these methods, as the truth is that they do not necessarily reflect a sound theoretical framework (De Muro et al. 2011). Additionally, these approaches are sensitive to the construction of the data; more specifically, the treatment of outliers (Nicoletti et al. 2000). As a result, the endogenously derived weights tend to be inconsistent over time and space, which renders comparison difficult (De Muro et al. 2011). Other statistical methods, such as the BOD, rely less on weighting assumptions as it lets the data decide on the weights and are sensitive to national priorities. However, the results of the BOD may not be comparable and lack transparency, in addition to the existence of a multiplicity of solutions (Gan et al., 2017). Also, the weights are country-specific, making the method unsuitable for the YAPI, which aims for cross-country comparison. Weighting from the BOD is mathematically calculated as follows:

$$\omega_c = \operatorname{argmax}_{\omega_{c,i}} \frac{\sum_{i=1}^m \omega_{c,i} I_{c,i}}{y_{ij} \in \left\{ \max_{\text{studied units}} \right\} \sum_{i=1}^m \omega_{c,i} I_{j,i}}$$

$$s. t. \sum_{i=1}^m \omega_{c,i} I_{j,i} \leq 1, \omega_{c,i} \geq 0$$

$$\forall i = 1, \dots, m; \forall j = 1, \dots, n$$

where ω_c is the weight vector of unit c , $\omega_{c,i}$ is the weight of the i th indicator of unit c , $I_{c,i}$ the normalized score of the i th indicator of unit c , and $I_{j,i}$ the normalized score of the i th indicator of the j th unit.

The UCM assumes that individual indicators depend on an unobserved variable plus an error term – for example, the “percentage of youth in AFS using internet in country j ” is dependent on the (unknown) propensity to adopt new ICTs plus an error term, e.g., the sampling error (OECD, 2008). Therefore, estimating the unknown component illuminates the relationship between the composite and its components, with the weight obtained set to minimise the error in the composite.

This method resembles the regression analysis (RA), except that the dependent variable is unknown under UCM. Like the RA, results from the UCM are sensitive to outliers. Also, it may create identification problems if indicators are multicollinear, and reliability and robustness of the model may be lost when data is inadequate (Gan et al., 2017; Greco et al., 2019). Mathematically, weights are derived as follows:

$$\omega_i = \frac{\delta_i^{-2}}{1 + \sum_{i=1}^m \delta_i^{-2}}, i = 1, \dots, n$$

where δ_i is the variant of the i th indicator. Participatory methods incorporate various stakeholders—experts, citizens and politicians. This approach is feasible when there is a well-defined basis for a national policy, which often are unavailable, or may deliver contradictory results, for international comparisons. These include the BAL, in which experts are allocated a “budget” of N points (often 100) to be distributed over several indicators, “paying” more for indicators whose importance they want to stress. The BAL, however, is optimal only for a maximum of 10-12 indicators; the initial YAPI has 28 indicators. Moreover, the BAL tends to measure urgency rather than importance of the phenomenon, and is region-specific (Gan et al., 2017).

Similar to BAL, the AHP (pairwise comparison of attributes) enables the derivation of overall attribute value based on several rotating comparisons, rather than simply assigning arbitrarily given weights. It generates weights that are less sensitive to errors of judgement but requires a high number of pairwise comparisons [$n(n-1)/2$], which may create inconsistencies and cognitive stress if each cluster consists of too many indicators. Weights in AHP are calculated as follows:

$$A\omega = \lambda\omega$$

where A is the comparison matrix, λ the largest eigenvalue of A , and ω the weight vector as well as the eigen value corresponding to λ .





Annex 6: Photo Documentation of YAPI Pilot Events



Consultation Workshop



June 2024. Kigali, Rwanda



Training Workshop



July 2025, Lagos, Nigeria





Data cleaning and validation workshop



October 2025, Addis Ababa, Ethiopia



Technical Writeshop



November 2025, Lusaka, Zambia





References

African Capacity Building Foundation (2017). Africa Capacity Report 2017: Building Capacity in Science, Technology and Innovation for Africa's Transformation. Harare, Zimbabwe. ACBF

African Capacity Building Foundation (2019). Africa Capacity Report 2019: Fostering Transformative Leadership for Africa's Development. ACBF

African Union Commission (2025). CAADP Strategy and Action Plan (2026-2035). African Union.

Agwara H. & Kilelu C. (2023). Scaling Micro and Small Businesses for Healthy and Sustainable Food Systems in Kenya (Technical Research Report), Wasafiri Consulting Kenya/IIDRC

Becker, W., Saisana, M., Paruolo, P., & Vandecasteele, I. (2017). Weights and importance in composite indicators: Closing the gap. *Ecological Indicators*, 80, 12–22. <https://doi.org/10.1016/j.ecolind.2017.03.056>

Berckmoes, L. H., & White, B. (2016). Youth, Farming, and Precarity in Rural Burundi. In R. Huijsmans (Ed.), *Generating Development: A Relational Approach to Children, Youth and Development* (pp. 291–312). Palgrave Macmillan UK. https://doi.org/10.1057/978-1-137-55623-3_13

Bonyadi, E., & Sarreshtehdari, L. (2021). The Global Entrepreneurship Index (GEI): A critical review. *Journal of Global Entrepreneurship Research*, 11(1), 469–488. <https://doi.org/10.1007/s40497-021-00302-0>

Boye, M., Ghafoor, A., Wudil, A. H., Usman, M., Prus, P., Fehér, A., & Sass, R. (2024). Youth Engagement in Agribusiness: Perception, Constraints, and Skill Training Interventions in Africa: A Systematic Review. *Sustainability*, 16(3), 1096. <https://doi.org/10.3390/su16031096>

Department for Communities and Local Government. (2009). Multi-criteria analysis manual for making government policy. Crown. <https://www.gov.uk/government/publications/multi-criteria-analysis-manual-for-making-government-policy>

El Gibari, S., Gómez, T., & Ruiz, F. (2019). Building composite indicators using multicriteria methods: A review. *Journal of Business Economics*, 89(1), 1–24. <https://doi.org/10.1007/s11573-018-0902-z>

Faghih, N., Bonyadi, E., & Sarreshtehdari, L. (2021). Comparison of the entrepreneurial motivation in different economic groups. *Journal of Global Entrepreneurship Research*, 11(1), 29–39. <https://doi.org/10.1007/s40497-021-00268-z>

Fani, D.C.R.; Henrietta, U.U.; Oben, E.N.; Dzever, D.D.; Obekpa, O.H.; Nde, A.T.; Sani, M.; Annih, M.G.; Martin, D.N.P. Assessing the performance and participation among young male and female entrepreneurs in agribusiness: A case study of the rice and maize subsectors in Cameroon. *Sustainability* 2021, 13, 2690.

Forman, E.H.; Peniwati, K. Aggregating individual judgments and priorities with the analytic hierarchy process. *Eur. J. Oper. Res.* 1998, 108, 165–169.

Gan, X., Fernandez, I. C., Guo, J., Wilson, M., Zhao, Y., Zhou, B., & Wu, J. (2017). When to use what: Methods for weighting and aggregating sustainability indicators. *Ecological Indicators*, 81, 491–502. <https://doi.org/10.1016/j.ecolind.2017.05.068>

Geza, W., Ngidi, M., Ojo, T., Adetoro, A. A., Slotow, R., & Mabhaudhi, T. (2021). Youth Participation in Agriculture: A Scoping Review. *Sustainability*, 13(16), 9120. <https://doi.org/10.3390/su13169120>

Giuliani, A.; Mengel, S.; Paisley, C.; Perkins, N.; Flink, I.; Oliveros, O.; Wongtschowski, M. Realities, perceptions, challenges, and aspirations of rural youth in dryland agriculture in the Midelt Province, Morocco. *Sustainability* 2017, 9, 871.

Greco, S., Ishizaka, A., Tasiou, M., & Torrisi, G. (2019). On the Methodological Framework of Composite Indices: A Review of the Issues of Weighting, Aggregation, and Robustness. *Social Indicators Research*, 141(1), 61–94. <https://doi.org/10.1007/s11205-017-1832-9>

Handbook on Constructing Composite Indicators: Methodology and User Guide. (2008, August 21). OECD.



https://www.oecd.org/en/publications/handbook-on-constructing-composite-indicators-methodology-and-user-guide_9789264043466-en.html

Harmacek, J., Mustafa, B., A., and Htitich, M. (2023): Youth Progress Index 2023: Methodology Note, Social Progress Imperative, Washington, DC & European Youth Forum, Brussels.

HM Treasury. (2024). Green Book supplementary guidance: Multi-criteria decision analysis. UK Government. <https://www.gov.uk/government/publications/green-book-supplementary-guidance-multi-criteria-decision-analysis>

Jager, J.; Putnick, D.L.; Bornstein, M.H. More than just convenient: The scientific merits of homogeneous convenience samples. *Monogr. Soc. Res. Child. Dev.* 2017, 82, 13–30. JRC141107.

Kademani, S., Nain, M. S., Singh, R., Roy, S. K., Prabhakar, I., Ranjan, A., Karjigi, K. D., Patil, M., Dash, D., & Quader, Sk. W. (2025). Quantifying support for agripreneurs: A multidimensional scale development and analysis of institutional mechanisms. *Journal of Global Entrepreneurship Research*, 15(1), 12. <https://doi.org/10.1007/s40497-025-00429-4>

Kodom, M.; Azumah, S.B.; Boateng, N.A.; Tsekpo, E.M.; Mensah, K.B.; Boateng, E. Changing the perceptions and attitudes of rural Ghanaian youth towards cocoa farming. *Dev. Pract.* 2022, 32, 958–967.

Lamanna C, Coe R, Crossland M, Fuchs LE, Barahona C, Chiputwa B, Orero L, Adoyo B, Geck M. (2024). Developing holistic assessments of food and agricultural systems: A meta-framework for metrics users. Working Paper 4. Bogor, Indonesia and Nairobi, Kenya: CIFOR-ICRAF: The Transformative Partnership Platform on Agroecology.

Magagula, B., & Tsvakirai, C. Z. (2020). Youth perceptions of agriculture: Influence of cognitive processes on participation in agripreneurship. *Development in Practice*, 30(2), 234–243. <https://doi.org/10.1080/09614524.2019.1670138>

Mazziotta, M. & Pareto, A. (2013). Methods for constructing composite indices: one for all or all for one? *Rivista Italiana di Economia Demografia e Statistica* Volume LXVII n. 2 Aprile-Giugno 2013

Mendoza, G. A., Macoun, P., Prabhu, R., Sukadri, D., Purnomo, H., & Hartanto, H. (1999, June 21). Guidelines for applying multi-criteria analysis to the assessment of criteria and indicators. CIFOR-ICRAF. <https://doi.org/10.17528/cifor/000769>

Mulema, J., Mugambi, I., Kansiime, M., Chan, H.T., Chimalizeni, M., Pham, T. X., & Oduor, G. (2021). Barriers and opportunities for the youth engagement in agribusiness: Empirical evidence from Zambia and Vietnam. *Development in Practice*, 31(5), 690–706. <https://doi.org/10.1080/09614524.2021.1911949>

Nardo, M. et al. (2005), “Handbook on Constructing Composite Indicators: Methodology and User Guide”, OECD Statistics Working Papers, No. 2005/03, OECD Publishing, Paris, <https://doi.org/10.1787/533411815016>.

OECD & European Commission, Joint Research Centre. (2008). Handbook on constructing composite indicators: Methodology and user guide. OECD Publishing. <https://doi.org/10.1787/9789264043466-en>

Ogunmodede, A. M., Ogunsanwo, M. O., & Manyong, V. (2020). Unlocking the potential of agribusiness in Africa through youth participation: An impact evaluation of N-power Agro Empowerment Program in Nigeria. *Sustainability*, 12(14), 5737.

Olayide O. E. (2021). Assessing sustainable agriculture and food systems in Africa: Thematic areas and indicators of progress. *Bus Strat Dev.* 2021;4:4–10. <https://doi.org/10.1002/bsd2.151>.

Olayide, O.E., Saadatou A. Sangare, Jawoo Koo, and Hua Xie. (2020). Targeting Small-Scale Irrigation Investments using Agent-Based Modeling: Case Studies in Mali and Niger, ZEF– Discussion Papers on Development Policy No. 299, Center for Development Research, Bonn, October 2020, pp. 35.

Osei, C. D., & Zhuang, J. (2024). The Effects of Institutional Supports on Farm Entrepreneurial Performance: Exploring the Mediating Role of Entrepreneurial Orientation. *SAGE Open*, 14(1), 21582440241227713. <https://doi.org/10.1177/21582440241227713>

Ouko, K. O., Ogola, J. R. O., Ng'on'ga, C. A., & Wairimu, J. R. (2022). Youth involvement in agripreneurship as Nexus for poverty reduction and rural employment in Kenya. *Cogent Social Sciences*, 8(1), 2078527. <https://doi.org/10.1080/23311886.2022.2078527>



Paruolo, P., M. Saisana and A. Saltelli (2013). Ratings and rankings: Voodoo or science? *Journal of the Royal Statistical Society, A* 176(3), 609–634.

Purvis, G.; Louwagie, G.; Northey, G.; Mortimer, S.; Park, J.; Mauchline, A.; Finn, J.; Primdahl, J.; Vejre, H.; Vesterager, J.P.; et al. Conceptual development of a harmonised method for tracking change and evaluating policy in the agri-environment: The Agri-environmental Footprint Index. *Environ. Sci. Policy* 2009, 12, 321–337.

Seth, S. and McGillivray, M. (2016). “Composite indices, alternative weights, and comparison robustness.” OPHI Working Paper 106, University of Oxford.

Smidt, H. J., & Jokonya, O. (2022). Factors affecting digital technology adoption by small-scale farmers in agriculture value chains (AVCs) in South Africa. *Information Technology for Development*, 28(3), 558–584. <https://doi.org/10.1080/02681102.2021.1975256>

Thurlow, James; Holtemeyer, Brian; Jiang, Shiyun; Pauw, Karl; and Randriamamonjy, Josee. 2025. Measuring agrifood systems: New indicators and global estimates. IFPRI Discussion Paper 2339. Washington, DC: International Food Policy Research Institute. <https://hdl.handle.net/10568/174848>

Umeifekwem, U.T., Eme, O. I., & Okeke, M. I. (2023). Youth Empowerment Schemes in Nigeria: A Study on N-Power Programme. *Irish International Journal of Law, Political Sciences and Administration*, 7(3), 71–88.

World Intellectual Property Organization (WIPO) (2024). Global Innovation Index 2024: Unlocking the Promise of Social Entrepreneurship. Geneva: WIPO. DOI:10.34667/tind.50062

Yami, M.; Feleke, S.; Abdoulaye, T.; Alene, A.D.; Bamba, Z.; Manyong, V. African rural youth engagement in agribusiness: Achievements, limitations, and lessons. *Sustainability* 2019, 11, 185.

Zulu, L. C., Djenontin, I. N. S., & Grabowski, P. (2021). From diagnosis to action: Understanding youth strengths and hurdles and using decision-making tools to foster youth-inclusive sustainable agriculture intensification. *Journal of Rural Studies*, 82, 196–209. <https://doi.org/10.1016/j.jrurstud.2021.01.023>.





Notes

Handwriting practice lines consisting of multiple horizontal dashed lines.





African Union



Youth in Agrifood Systems
Performance Index (YAPI)

