



Book of Good Practices for the Greening of Skills and Qualifications in Africa



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FOREWORD FROM THE AFRICAN CONTINENTAL QUALIFICATIONS FRAMEWORK (ACQF-II) PROJECT

The African Continental Qualifications Framework (ACQF) was established as a continental instrument to support the development of trusted, transparent, and comparable qualifications systems across Africa. In the context of accelerating climate change, rapid urbanisation, and evolving labour market demands, the greening of skills and qualifications is increasingly becoming a central priority for sustainable and inclusive growth.

This Book of Good Practices for the Greening of Skills and Qualifications in Africa is a technical output of the ACQF–AASU collaboration and responds to the need for evidence-based approaches that connect policy, practice, and innovation. The publication documents a diverse set of initiatives from across the continent, illustrating the role of RPL and micro-credentials in validating skills acquired outside formal education, the integration of green competences into curricula and the value of community-based and youth-led approaches to skills development.

The ACQF-II project team acknowledges the leadership of the All-Africa Students Union and the commitment of all participating organisations in this project. This publication aims to serve as a resource for policymakers, qualifications authorities, education and training providers, and all stakeholders engaged in the greening of Africa’s skills ecosystem. By documenting and analysing good practices, and by aligning them with ACQF’s objectives, we seek to contribute to the development of qualifications systems that are responsive to the needs of learners, workers, and societies in transition. It is our hope that the insights and recommendations presented in this book will inform ongoing reforms and inspire further innovation in the field of green skills and qualifications.

FOREWORD BY THE AASU SECRETARY GENERAL

Africa is at a point of defining how it is going to grow. With the continent beginning to experience the increasing effects of climate change and go on the global journey to the path of green and resilient economies, the issue of skills, knowledge and innovation has never been more important. One of the most encouraging aspects is that our youth are already leading most of the leading solutions that are being developed in communities, schools, training institutions and workplaces. Yet, until now, much of this work has remained undocumented, unrecognised and disconnected from formal policy and qualifications systems.

This Book of Good Practices for the Greening of Skills and Qualifications in Africa represents an important step in bridging that gap. Developed under the AASU-ACQF II Pilot Project on "Greening Skills and Qualifications in Africa – Users' Engagement," this publication brings together concrete experiences from across the continent that demonstrate how African actors are already enabling climate action, building green competences and shaping the future of learning and work. These cases, submitted by organisations from Kenya, Nigeria, Mozambique, Zambia, The Gambia and Egypt, reflect the diversity, innovation and resilience that characterise Africa's response to the climate and skills agenda.

The All-Africa Students Union is proud to have led this process. Our engagement with the African Continental Qualifications Framework (ACQF) recognises that sustainable development depends on qualifications and skills systems that value formal, non-formal and informal learning; that support mobility and lifelong learning; and that empower young people to transform their communities and economies.



This case book reinforces a key truth: Africa does not lack innovation, what it requires is visibility, recognition and system-level integration. The practices documented here show that schools can become hubs of environmental stewardship; that youth-led organisations can pioneer community-based climate solutions; that Recognition of Prior Learning (RPL) and micro-credentials can open doors for informal workers; and that green skills can drive livelihoods in sectors ranging from the blue economy to circular manufacturing.

I wish to commend all the organisations that submitted their work to this call, and particularly the six whose practices are presented in detail. Their commitment to education, sustainability and community advancement exemplifies the future we want for Africa. I also extend my gratitude to the ACQF II team, and our partners for their continued collaboration and support in building a continental qualifications ecosystem that works for African learners and African realities.

It is my hope that this publication will serve as a practical resource for policymakers, educators, youth leaders, employers and development actors. More importantly, I hope it inspires the scaling of these approaches, ensuring that thousands more young Africans gain the green skills, recognition and opportunities needed to thrive in a rapidly changing world.

AASU remains committed to championing the voices, leadership and potential of African students. Together, we can build a greener, more just and prosperous continent for all.

Peter Kwasi Kodjie
Secretary General
All-Africa Students Union

1.0 INTRODUCTION

Africa's green transition is no longer a future aspiration; it is a present necessity. Climate vulnerability, rapid urbanisation, youth unemployment and persistent skills gaps are converging at the same time as new opportunities emerge in renewable energy, circular economy value chains, sustainable agriculture and nature-based solutions. Recent analyses suggest that well designed green transitions could create tens of millions of new jobs globally by 2030, many of them in emerging economies, if countries invest in skills, infrastructure and supportive policy frameworks (ILO, 2022; ILO, 2024). For Africa, projections indicate that green growth in sectors such as renewable energy, waste management and climate smart agriculture could generate several million new jobs in the near term, with far larger potential over the longer horizon to 2050.

At the same time, demand for green skills on the continent is already visible in labour market data. An ACQF skills dashboard based on online job postings identifies 279 distinct green skills and shows that the share of vacancies requiring at least one green skill is increasing, with countries such as Angola, Cameroon and Ghana recording some of the fastest growth between 2022 and 2024. Waste management, ISO 14000 environmental management standards and renewable energy technologies feature prominently among the most requested competences, while occupations such as solar engineers, solar installers and wind turbine technicians show particularly high "green shares" of their skill profiles. These trends confirm that Africa's labour markets are already adjusting to sustainability imperatives, even if the pace and depth of change differ across countries and sectors.

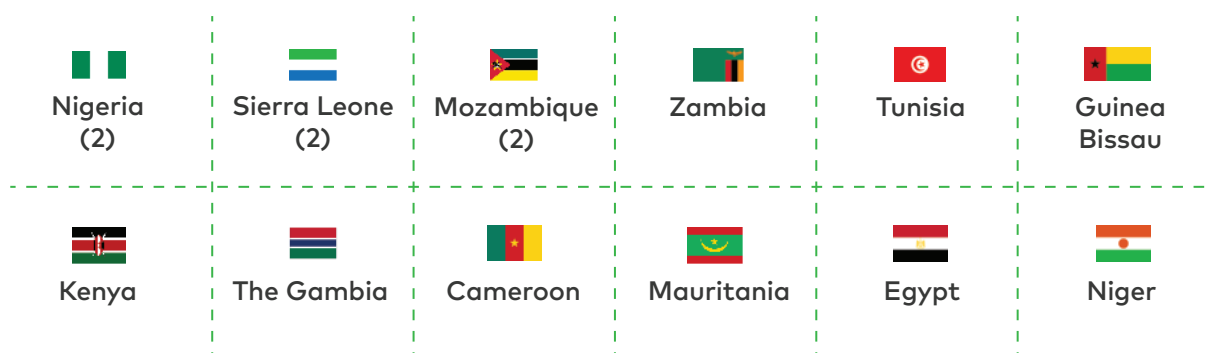
Yet, there is a persistent mismatch between this emerging demand and the current provision of education and training. Studies on Technical and Vocational Education and Training (TVET) and skills development in Africa underline that many young people still graduate without the competences required by green industries, while TVET institutions lack the resources, guidance and labour market intelligence needed to systematically "green" their programmes. This skills gap risks slowing down the continent's green transition and limiting the ability of youth and women to benefit from new economic opportunities.

Against this backdrop, the African Continental Qualifications Framework (ACQF) has been established as a continental instrument to build a common area of trusted qualifications that supports mobility, lifelong learning and inclusive green and digital transformation. ACQF II project, launched in 2023, places particular emphasis on skills for green future jobs, comparability of qualifications and recognition of prior learning across African countries. Within this wider agenda, the All Africa Students Union (AASU) has partnered with ACQF II project to document and amplify concrete practices that are already greening skills and qualifications in diverse African contexts.

1.1 Purpose and scope of the Book of Good Practices

The Book of Good Practices for the Greening of Skills and Qualifications in Africa is one of the technical outputs of this collaboration. It responds to an ACQF–AASU Call for Good Practices on “Greening skills and qualifications in Africa,” which in 2025 invited organisations across the continent to submit examples that demonstrate how policies, programmes and local initiatives are strengthening green competences in line with the ACQF vision.

Seventeen submissions were received from all five subregions of Africa, covering



These cases span a wide spectrum of intervention types, including:

- policy innovations and national strategies for green skills;
- reforms in education and training, including school based climate education and TVET;
- industry and employer driven practices for green jobs;
- technology enabled solutions, recognition of prior learning (RPL) and micro credentials;
- initiatives that valorise indigenous knowledge and community based climate resilience.

From this initial pool, six practices were selected for in depth documentation and cross case analysis. They represent diverse thematic and geographic contexts: school based environmental programmes in Kenya, a climate education and certification framework with continental potential, blue economy skills development in Mozambique, tourism and wildlife based environmental stewardship in Zambia, circular bioeconomy and clean energy entrepreneurship in The Gambia, and circular economy models with co-benefits for youth and women in Egypt. Together, they offer a grounded view of how African actors are already shaping the greening of skills and qualifications from bottom-up, often with limited resources but high levels of innovation and community engagement.

1.2 Situating the cases within the African and global policy context

The selected practices are not isolated projects. They are embedded in a dense policy environment shaped by global climate commitments, continental frameworks and national development strategies. Analyses presented at the [ACQF Kinshasa Forum](#) highlight that green and digital transitions are now central to recovery and growth strategies, with significant implications for jobs, education and training systems. Green growth opportunities are particularly strong in sectors such as energy, mobility and agriculture, but they require education systems to increase environmental awareness, update curricula and develop new occupational standards.

Definitions of green skills used by ACQF and partner institutions converge around the idea of “the knowledge, skills, values and attitudes needed to live, work and act in economies and societies that seek to reduce the impact of human activity on the environment”. This includes transversal competences related to sustainable thinking and responsible citizenship, specific skills for adapting existing occupations to greener processes, and highly specialised skills required for developing and implementing green technologies.

Within Africa, the ACQF project and its partners have also underlined the importance of recognising learning that occurs in informal and non-formal settings, which is often where green practices emerge first, for example through community-based adaptation, informal recycling or artisanal renewable energy solutions. Recognition of Prior Learning (RPL) and related validation processes are therefore seen as key instruments to valorise existing green competences and to integrate them into qualifications frameworks, so that workers and learners can access further training and decent employment. Several of the cases in this book, such as Blue Forest in Mozambique and GreenCoal in The Gambia, explicitly experiment with RPL and micro credentials to connect grassroots innovation with formal qualification pathways.

1.3 Objectives and contribution of this technical report

This technical casebook has three main objectives.

First, it documents in detail a set of promising African practices that illustrate how greening of skills and qualifications can be advanced through schools, youth organisations, TVET institutions, community enterprises and research initiatives. By presenting contextual background, objectives, methodologies, results and scalability dimensions for each case, the book seeks to provide practical insights for practitioners, policymakers and social partners who wish to design similar interventions.

Second, it offers a cross-case analysis that distils common patterns and distinctive innovations. This analysis links the empirical evidence from the six selected practices with broader trends identified in ACQF green skills data work, TVET transformation literature and international assessments of green jobs, highlighting both opportunities and systemic bottlenecks. Issues such as the persistent skills mismatch, financing constraints, the coordination gap between sectoral initiatives, and the marginalisation of informal workers and youth are examined in relation to the concrete experiences of the case owners.

Third, the report translates these insights into targeted recommendations for policymakers, qualifications authorities, schools and universities, TVET providers, employers and youth organisations. The aim is to support the development of policies and programmes that are evidence based, context sensitive and aligned with ACQF principles on learning outcomes, quality assurance and recognition of diverse learning pathways.

1.4 Structure of the report

The remainder of the report is organised as follows. The next section describes the methodology used to identify, select and assess good practices, including the design of the Call for Good Practices, the scoring criteria applied to all 17 submissions and the process through which six cases were chosen for detailed documentation. Subsequent chapters present each of the six practices in a common template that facilitates comparison. A cross-case analysis chapter then draws together key findings across all cases under thematic headings such as policy innovation, pedagogical approaches, labour market linkages, inclusion of marginalised groups and use of ACQF related tools like RPL and micro credentials. The final chapters present recommendations for different stakeholder groups and a brief conclusion that reflects on the role of student and youth actors in shaping Africa's green skills ecosystem.

In this way, the Book of Good Practices aims to serve both as a knowledge product and as a practical tool. It showcases what is already working on the ground, while also informing ongoing debates on how to accelerate the greening of skills and qualifications across Africa in a way that is just, inclusive and anchored in African realities.

2.0 METHODOLOGY

This section describes how the Call for Good Practices was designed, how submissions were assessed, and how the six cases included in this book were documented and analysed. The approach was guided by ACQF principles on transparency, comparability and evidence-based policy learning, which emphasise agreed criteria, clear procedures and quality assurance in all referencing and validation exercises.

2.1 Overall design

The Book of Good Practices forms part of the ACQF–AASU pilot project on “Greening Skills and Qualifications in Africa – Users’ Engagement.” Within this project, AASU committed to launching a structured [Call for Good Practices](#), supported by a transparent evaluation framework and clear milestones for the development of the case book. The purpose was not only to collect inspiring examples, but to document them in a way that could inform qualifications reform, curriculum development and multi-stakeholder engagement on green skills across the continent.

Seventeen submissions were received from organisations working in all five subregions of Africa: Nigeria (2), Sierra Leone (2), Mozambique (2), Zambia, Tunisia, Guinea Bissau (2), Kenya (2), The Gambia, Cameroon, Mauritania, Egypt and Niger. The geographical spread allowed the case book to capture a diversity of linguistic, institutional and sectoral contexts, while still remaining manageable for in-depth analysis.

2.2 Call design and scope

The Call for Good Practices invited contributions aligned with the ACQF agenda on greening skills and qualifications, including the recognition that green jobs and competences are emerging across sectors such as energy, agriculture, tourism, construction and circular economy activities. The call targeted initiatives that addressed:

- **Policy innovations** – national or regional strategies, regulations or partnerships that promote green skills development.
- **Education and training** – curriculum reforms, teacher development, school and TVET programmes integrating sustainability competences.
- **Industry practices** – employer-led initiatives, apprenticeships or certification schemes for green jobs.
- **Technology and inclusion** – digital platforms, Recognition of Prior Learning (RPL), micro-credentials and other tools that widen access, especially for marginalised groups.
- **Indigenous knowledge** – local solutions for climate resilience, sustainable agriculture, renewable energy or ecosystem restoration.

A simple submission template was used, asking organisations to describe the context and objectives of the initiative, main activities and methodologies, results achieved, challenges, and elements of scalability or transferability. Respondents were also encouraged to indicate how their initiative connects to national qualifications frameworks (NQFs), TVET systems or ACQF-related tools such as RPL and learning outcomes, reflecting wider efforts to link green practices with qualifications policy.

2.3 Assessment criteria and scoring

All 17 submissions were reviewed and scored independently by a small assessment team using a common rubric. Each practice was scored out of 100 points against seven criteria:

- **Strategic relevance** – the extent to which the practice contributes to greening skills and qualifications in priority sectors and aligns with national or continental green transition goals.
- **Innovation** – novelty in approach, use of technology, integration of indigenous knowledge or new partnership models.
- **Industry practices** – employer-led initiatives, apprenticeships or certification schemes for green jobs.
- **Demonstrated impact** – evidence of outcomes for learners, workers, communities or institutions (for example, numbers trained, jobs created, ecosystems restored).
- **Indigenous knowledge** – potential to be replicated or scaled within and beyond the original context, including alignment with NQFs or ACQF.
- **Stakeholder engagement** – breadth and quality of collaboration among education providers, employers, communities, youth organisations and public authorities.
- **Policy alignment** – explicit links to national strategies, sectoral policies or qualifications reforms, in line with ACQF's emphasis on using good practices to inform systemic change.
- **Quality of evidence** – clarity of the narrative and strength of supporting documentation (data, evaluations, independent references, web presence)

Scores were compiled and discussed in a calibration meeting to ensure consistency of interpretation across assessors. Where there were large discrepancies, the submissions were re-read and consensus reached through discussion rather than simple averaging, consistent with ACQF's broader approach to peer review and referencing processes.

2.4 Selection of the six featured cases

Based on the scores and qualitative assessments, six practices were selected for detailed documentation in this case book. The selection process sought to:

- reflect geographical diversity (east, west, north, central and southern Africa);
- cover a range of intervention types (school-based programmes, community enterprises, research-driven initiatives, certification frameworks);
- include initiatives that engage different parts of the skills ecosystem, such as schools and universities, TVET institutions, employers, community organisations and youth-led groups;
- showcase practices that make explicit or emerging links to qualifications frameworks, RPL, micro-credentials or occupational standards, in line with ACQF's concern with learning outcomes and recognition of diverse pathways.

2.5 Documentation and validation of case studies

After selection, each case owner was invited to provide additional information, clarify data points and approve the final narrative. The case narratives in this book are therefore primarily based on the self-reported experiences, results and reflections of the project owners, supplemented by desk research on each initiative's public online footprint (websites, social media content, reports).

To support comparability and facilitate cross-case analysis, a common case template was used, covering:

- context and background;
- objectives;
- methodology and activities;
- results and outcomes;
- links to qualifications, NQFs or ACQF tools where relevant;
- elements of scalability and sustainability;
- conclusion and key lessons.

Only minimal editorial adjustments were made by AASU to improve readability, ensure coherence with the template and remove repetition. The original language, framing and emphasis chosen by the case owners were preserved as far as possible, in line with ACQF's emphasis on peer learning and mutual understanding among diverse actors rather than top-down standardisation.

2.6 Cross-case analysis

In a final step, the six cases were subjected to a cross-case analysis. The analysis combined:

- thematic coding of the narratives around recurrent dimensions (policy context, pedagogical approach, labour-market linkage, inclusion, use of RPL or micro-credentials);
- triangulation with emerging labour-market evidence from ACQF's green skills dashboard based on online job postings, which illustrates how demand for green competences is evolving across African countries and sectors;
- reference to broader experiences of greening TVET and skills development, such as Zimbabwe's heritage-based CBET reform and practical guidance tool for green skills, which provide a national-level example of how good practices can influence curricula and qualifications across sectors.

This mixed approach allows the case book to situate the six initiatives in a wider landscape where green skills are increasingly recognised as a driver of economic transformation, but where systemic challenges, skills mismatches, institutional capacity gaps and uneven recognition of informal learning, remain significant.

2.7 Limitations

The methodology has some limitations that should be borne in mind when interpreting the findings. First, the practices documented are based on voluntary submissions to an open call and therefore do not represent an exhaustive mapping of green skills initiatives in Africa. Second, the evidence is largely self-reported, with varying depth of quantitative data and independent evaluation across cases. Third, the scoring and selection process, while guided by clear criteria, necessarily involved qualitative judgement.

Nonetheless, by combining a structured call, transparent assessment criteria and systematic documentation with cross-case analysis and triangulation against wider ACQF work on green skills and TVET transformation, the methodology provides a robust basis for the technical insights and recommendations presented in the remainder of this report.

3.0 THE SIX DETAILED CASES

Case 1:

Integrating School-Based Environmental Programmes for Green Skills Development

Implementing Organisation: Climate and Child Initiative (CCI)

Country: Kenya



Background & Context

The Climate and Child Initiative operates in the Kakamega tropical rainforest region, an area facing accelerated deforestation, biodiversity loss and land degradation. Prior to the initiative, schools lacked structured opportunities to cultivate environmental competencies or engage learners in climate action. Green skills were minimally embedded in school programmes, limiting the development of ecological awareness and youth leadership.

Objectives

1. Strengthen environmental literacy and green skills among learners.
2. Support community-aligned ecosystem restoration, especially indigenous reforestation.
3. Develop youth leadership in climate governance and advocacy.
4. Influence curriculum and policy reforms for climate education.
5. Promote participatory learning, monitoring and innovation.

Methodology / Key Activities

- **Eco-Club Establishment:** 30+ eco-clubs formed across primary and secondary schools to serve as hubs of peer-to-peer learning and youth action.
- **Tree Planting & Monitoring:** Over 70,000 indigenous trees planted, with students assigned to nurture specific trees using practical agroforestry techniques.
- **School-Based Tree Nurseries:** Creation of student-managed nurseries focusing on propagation, seed selection and horticultural skills.
- **Creative Climate Advocacy:** Learners used music, poetry, public speaking and drama to raise awareness in schools and communities.
- **Community Engagement:** Intergenerational learning facilitated through school-community forums, environmental days and joint restoration actions.

Results & Achievements

- 70,000+ indigenous trees planted and monitored.
- Over 500 learners trained in biodiversity conservation, agroforestry and sustainable land management.
- Improved student confidence and environmental stewardship.
- Strengthened school–community collaboration and civic participation.
- Emerging student-led environmental initiatives beyond project sites.

Links to Skills, Qualifications & ACQF Priorities

- Builds transversal green competences (sustainability values, problem-solving, teamwork).
- Provides foundations for curriculum greening, aligned with ACQF guidance on integrating environmental learning outcomes.
- Contributes to community-based learning pathways, relevant to future RPL and micro-credential models.

Scalability & Sustainability

The school-based, low-cost model is replicable in rural and resource-constrained settings. The approach integrates indigenous knowledge and relies heavily on youth leadership, making it suitable for national scale through ministries of education and environment.

Conclusion

CCI demonstrates that experiential environmental education, when rooted in community contexts, can meaningfully build green skills while strengthening ecological restoration and youth civic leadership.

Case 2:

A Scalable Climate Education and Certification Framework

Implementing Organisation: West Africa Green Economic Development Institute (WAGEDI), in partnership with Carbon Literacy Project (CLP)



West Africa
Green Economic
Development Institute



Country: Nigeria

Background & Context

As African economies transition toward low-carbon growth, there is a rising demand for workforce models that build climate literacy and actionable environmental competencies. [The Carbon Literacy Project \(CLP\)](#) is a globally recognised climate-education standard that has certified over 100,000 individuals. CLP adapts easily to local contexts, making it ideal for African institutions, youth groups and TVET systems.

Objectives

1. Equip individuals with foundational climate science and carbon-management knowledge.
2. Promote measurable climate action through mandatory action pledges.
3. Enable institutions to integrate climate literacy into programmes.
4. Build local facilitator capacity and expand access to accredited green competencies.

Methodology / Key Activities

- **Modular Curriculum Delivery:** Training is delivered through in-person, digital and hybrid formats, ensuring accessibility.
- **Facilitator Training:** Thousands of facilitators trained globally, with supportive uptake in African youth organisations and universities.
- **Action-Based Certification:** Certification only awarded when learners commit to two measurable climate actions.
- **Institutional Integration:** Universities, TVET institutes and companies embed CLP in programmes, induction processes or sector-specific curricula.
- **Local Adaptation:** Materials contextualised in Nigeria, Kenya and South Africa through youth-led initiatives.

Results & Achievements

- 100,000+ certified globally.
- 4,000+ facilitators trained, enabling cascaded delivery.
- Recognised by the UN at COP21 as one of the top 100 global climate solutions.
- Measurable reductions in institutional carbon footprints in pilot sites.
- Growth of climate clubs, youth-led advocacy campaigns and employer-linked green jobs training.

Links to Skills, Qualifications & ACQF Priorities

- Direct contribution to green skills occupational standards.
- Supports teacher/facilitator development and micro-credential models; key areas of ACQF implementation.
- Facilitates regional harmonisation through an adaptable training standard that can integrate into NQFs.

Scalability & Sustainability

CLP's open-access, modular, low-infrastructure model is highly scalable across African countries. Costs are tiered, and delivery can be decentralised through local trainers and youth organisations.

Conclusion

CLP provides a robust, action-oriented framework for building green skills at scale, strengthening Africa's capacity for climate-responsive education and workforce development.



Case 3:

Blue Florest – Environmentalisation of Coastal Competencies for the Blue Economy

Implementing Organisation: MARMO – Mar Moçambique

Country: Mozambique



Background & Context

Mozambique's coastline is rich in biodiversity but threatened by overfishing, erosion and climate impacts. Coastal communities depend heavily on marine ecosystems yet lack formal opportunities to develop green technical skills. Blue Florest was designed to equip these communities, especially youth and women, with competencies for sustainable participation in the blue economy.

Objectives

1. Develop a training model based on coastal green competencies.
2. Promote socio-economic inclusion through micro-credits and RPL.
3. Link indigenous knowledge and community practices to formal qualifications.
4. Strengthen local governance of marine ecosystems.

Methodology / Key Activities

- Technical Training:
 - Mangrove reforestation and ecological monitoring.
 - Mariculture, sustainable fishing and coastal tourism.
 - Circular economy techniques for coastal waste.
- Recognition of Prior Learning: Validation of local ecological knowledge.
- Micro-Credentials: Development of short coastal-competency modules aligned with ACQF principles.
- Environmental Education: School workshops on ocean literacy and climate awareness.
- Partnerships: Collaboration with universities, TVET schools and local authorities.

Results & Achievements

- 200+ youth and women trained.
- 30,000+ mangrove seedlings planted and monitored with digital tools (NDVI/MVI).
- Five coastal management committees established.
- RPL integrated into local technical education practices.
- Network of institutional partners supporting implementation.

Links to Skills, Qualifications & ACQF Priorities

- Strong alignment with RPL, micro-credentials and competency-based training.
- Advances ACQF objectives of recognising diverse learning forms.
- Supports development of green occupational standards in blue economy sectors.

Scalability & Sustainability

The model is low-cost, community-centred and easily adaptable to other coastal regions. Its integration of indigenous skills provides a culturally grounded pathway for expanding formal qualifications in marine conservation.

Conclusion

Blue Florest demonstrates how community-based green skills development can enable both ecological restoration and inclusive participation in Africa's emerging blue economy.

Case 4:

TWESEP – Tourism, Wildlife and Environmental Sustainability Education Project

Implementing Organisation: Know Your Wildlife and the Environment Zambia (KWEZ)

Country: Zambia

Background & Context

Zambia's TWESEP programme was created to address gaps in environmental literacy and youth leadership within schools while leveraging tourism and wildlife education as entry points. The programme aligns with national policies on environmental stewardship and ACQF's vision on green competencies.

Objectives

1. Improve environmental knowledge and biodiversity awareness.
2. Build practical green skills (waste management, tree planting, water conservation).
3. Strengthen youth leadership and community advocacy.
4. Increase policy literacy on environmental laws.
5. Integrate sustainability education into school curricula.

Methodology / Key Activities

- Implementation across 10 schools (primary and secondary).
- Training of 150+ students using student-to-pupil transfer methods.
- Eco-clubs established and mentored.
- School and community projects including recycling drives, eco-art, reforestation and clean-up actions.
- Partnerships with government agencies and NGOs for technical input.

Results & Achievements

- 150+ students trained; over 1,000 pupils reached.
- 86% improvement in environmental literacy (pre/post assessments).
- Monthly eco-masterclasses and youth leadership forums.
- National recognition through the African Tourism Partners Sustainability Award.
- Expansion of student climate activism into neighbouring districts.

Links to Skills, Qualifications & ACQF Priorities

- Bridges formal schooling and non-formal learning, supporting future RPL.
- Offers practical evidence for curriculum greening and competency-based environmental education.
- Reinforces ACQF's emphasis on lifelong learning and mobility.

Scalability & Sustainability

The programme's modular design, plus digital learning pilots and public-private partnerships, positions TWESEP for expansion in Zambia and replication in neighbouring countries.

Conclusion

TWESEP provides a replicable model for school-led green skills development, combining environmental education, tourism literacy and youth activism in a structured learning ecosystem.



Case 5:

GreenCoal – Circular Bioeconomy Solutions for Clean Energy and Green Jobs

Implementing Organisation: Green-Up Gambia

Country: The Gambia



Background & Context

The Gambia faces severe deforestation due to charcoal reliance, alongside significant urban waste challenges. GreenCoal transforms agricultural and organic waste into biochar briquettes, providing green jobs, clean energy and climate mitigation benefits.

Objectives

1. Build green skills in waste valorisation and clean energy production.
2. Use RPL to validate informal competencies among youth and women.
3. Support green micro-enterprises and cooperatives.
4. Influence national policy on circular economy and clean cooking.

Methodology / Key Activities

- Technical training in biomass processing, pyrolysis and briquette formation.
- Community-led RPL for informal waste workers.
- Micro-credential pilots in biochar production and clean-cooking technologies.
- Enterprise support through an incubator model.
- Policy participation at municipal and national climate forums.

Results & Achievements

- 60+ youth and women trained.
- 240 tonnes of waste transformed into biochar briquettes.
- Estimated 60 tonnes of charcoal replaced.
- Two micro-enterprises and three women-led cooperatives launched.
- Recognition from local authorities as a leading waste-to-energy model.

Links to Skills, Qualifications & ACQF Priorities

- Strong demonstration of RPL in informal and community settings.
- Provides a basis for developing ACQF-aligned micro-credentials.
- Supports green job creation and labour-market integration.

Scalability & Sustainability

The model uses low-cost, locally available materials and is designed for replication nationwide. Plans include a national learning exchange and ToT programme.

Conclusion

GreenCoal shows how circular economy innovation can deliver green jobs, community resilience and climate benefits while strengthening recognition of informal learning.



Case 6:

Circular Economy and Green Skills for Youth and Women

Implementing Organisation: Fundraising Opportunities Research Initiative

Country: Egypt

Background & Context

Egypt's ready-made garments (RMG) and agricultural sectors generate significant waste streams but also hold potential for circular economy transformation. This study analysed how circular practices, combined with green skills development, can strengthen livelihoods, particularly for youth and women.

Objectives

1. Map green and circular practices that can generate employment.
2. Identify grassroots initiatives and local CSO interventions.
3. Assess barriers to participation in green sectors.
4. Offer recommendations to expand inclusion in circular economy models.

Methodology / Key Activities

- Field research in Cairo and Sohag across RMG and agriculture sectors.
- Identification of grassroots circular-economy practices (reuse, repair, recycling).
- Stakeholder interviews and community workshops.
- Assessment of vocational green-skills needs and gaps.
- Mapping of CSO-led interventions supporting job creation.

Results & Achievements

- Increased adoption of circular practices in target communities.
- Development of a green skills report for RMG/agriculture.
- Growth in SMEs and self-employment in circular activities.
- Documented economic co-benefits (7–30% gain across cases).
- Highlights major structural barriers such as informal sector exclusion.

Links to Skills, Qualifications & ACQF Priorities

- Direct relevance to TVET reform, especially in green occupational standards.
- Shows potential for NQF integration of circular-economy skill sets.
- Highlights pathways for youth and women's participation, a core ACQF objective.

Scalability & Sustainability

Recommendations include strengthening CSO capacity, expanding sector-based TVET curricula, and enabling formal recognition of informal circular-economy skills.

Conclusion

This study presents a strong evidence base for integrating circular economy models into green-skills development, with clear gender and youth empowerment benefits.

4.0 CROSS-CASE ANALYSIS

This section synthesises insights from the six selected practices to identify recurring themes, innovations, structural gaps, and emerging opportunities across Africa's green-skills landscape. The analysis draws on the documented cases, ACQF green-skills data, and relevant literature on greening TVET, RPL, and labour-market transitions. It is structured around six analytical dimensions:

1. Policy and Strategic Alignment
2. Pedagogical and Skills-Development Approaches
3. Labour-Market Linkages and Employability
4. Recognition of Prior Learning, Micro-Credentials and Qualifications Pathways
5. Inclusion, Equity and Youth Leadership
6. Scalability, Systemic Weaknesses and Opportunities for ACQF

4.1 Policy and Strategic Alignment

Across the six cases, there is strong convergence with continental priorities on greening skills, as outlined in ACQF II and AU frameworks on climate action and skills for the future. Many of the practices explicitly engage with national environmental, climate or education policies, reflecting the growing recognition that green competencies must be embedded into systemic reforms rather than delivered as ad-hoc projects.

- Cases in Kenya, Zambia and Mozambique demonstrate alignment with national forestry, tourism, and coastal conservation strategies.
- GreenCoal (The Gambia) engages with municipal and national climate-policy processes, illustrating how grassroots innovations can shape policy dialogues.
- The Carbon Literacy Project (Nigeria) showcases a scalable framework that has already informed municipal-carbon strategies globally and can be integrated into national TVET systems.
- Egypt's circular-economy study highlights gaps: although strong policy commitments exist, informal workers remain largely excluded; a challenge echoed in ACQF analyses of labour-market fragmentation.

Overall insight:

Policy alignment increases legitimacy and scalability of local green-skills initiatives, but gaps remain in translating policy intent into qualifications, standards and curricula.

4.2 Pedagogical and Skills-Development Approaches

A notable strength across all cases is the use of experiential and hands-on learning, which reflects ACQF guidance on competency-based approaches for greening TVET.

Practical, applied learning features prominently:

- **Kenya:** indigenous tree-nursery management, agroforestry skills, ecological monitoring.
- **Mozambique:** mariculture, sustainable fishing, and coastal-tourism skills.
- **Zambia:** waste sorting, eco-art, reforestation, hands-on community projects.
- **The Gambia:** pyrolysis, briquette formation, waste-valorisation processes.
- **Nigeria (CLP):** action-based certification requiring measurable climate actions.
- **Egypt:** sectoral green-skills mapping and training needs analysis.

The pedagogical approaches reflect three common features:

a) Community-embedded learning

Most cases situate learning within local ecosystems and livelihoods, ensuring relevance and cultural grounding.

b) Youth-centred models

Eco-clubs, student associations and youth-led teams drive project implementation; mirroring continental research showing that Africa's youth are already shaping green transformations.

c) Blended learning and institutional integration

CLP and TWESEP make strong use of digital tools, while Mozambique integrates RPL and school-based ocean literacy programmes.

Overall insight:

African green-skills innovation is emerging primarily from practice-based, community-grounded initiatives, not from classroom-based instruction alone. This underscores the need for flexible, learner-centred qualifications pathways.

4.3 Labour-Market Linkages and Employability

The cases reveal varying degrees of labour-market integration, but several promising patterns emerge:

Strong labour-market links

- GreenCoal directly generates green jobs and micro-enterprises.
- Mozambique's Blue Florest supports livelihoods in tourism, fisheries and conservation, priority sectors for national economic development.
- Egypt's circular-economy case identifies clear opportunities in RMG, agriculture and recycling sectors.
- CLP has employer-facing components, enabling integration into company sustainability frameworks.

Emerging links

- **Zambia's TWESEP** and **Kenya's CCI** focus on foundational skills for future employment trajectories, although not immediately tied to formal labour markets.

These patterns are consistent with ACQF job-posting analysis, which shows:

- Rising demand for green competences in waste management, environmental monitoring, renewable energy and circular economy roles.
- Strong growth in "green-intensive" occupations such as solar engineering, eco-tourism, environmental auditing and sustainable agriculture.

Overall insight:

Labour-market linkages are stronger where projects directly intersect with productive sectors (energy, waste, blue economy). School-based programmes lay foundational competencies but require stronger pathways into vocational and employment systems.

4.4 Recognition of Prior Learning, Micro-Credentials and Qualifications Pathways

Three cases (Mozambique, The Gambia, Egypt) explicitly engage with RPL, micro-credentials and informal skills validation, reflecting a major ACQF priority.

Examples of linkage:

- **Blue Florest (Mozambique)**
 - Uses RPL to validate indigenous coastal skills.
 - Develops micro-credentials aligned with ACQF outcomes.
- **GreenCoal (The Gambia)**
 - Applies community-centred RPL for informal waste workers and biomass handlers.

- **Circular Economy Study (Egypt)**
 - Identifies skill gaps and proposes integration of CE practices into TVET standards.
- **CLP (Nigeria)**
 - Operates as a global micro-credential model adaptable to NQFs.

These cases illustrate the potential of ACQF tools to:

- Recognise learning beyond formal education.
- Enable mobility and progression for marginalised groups.
- Inform national occupational standards for new green sectors.

Overall insight:

RPL and micro-credentials are powerful enablers for greening skills in Africa, particularly in sectors where informal knowledge and community practices dominate.

4.5 Inclusion, Equity and Youth Leadership

Across the cases, inclusion emerges as a strong theme, particularly regarding youth, women and informal workers.

- **Youth Leadership**
 - Central to Kenya, Zambia, Nigeria (CLP) and Mozambique cases.
 - Youth serve as trainers, facilitators, eco-club leaders, climate advocates.
- **Women's Inclusion**
 - Strongest in The Gambia and Egypt, where women-led cooperatives, SMEs and circular-economy roles are actively developed.
- **Informal Economy Inclusion**
 - Core to The Gambia and Egypt.
 - Supported through RPL and micro-enterprise development.
- **Rural inclusion**
 - Kenya, Mozambique and Zambia highlight rural and peri-urban implementation in areas with high climate vulnerability.

These findings align with ACQF's emphasis on:

- widening access to learning opportunities;
- ensuring qualifications benefit marginalised groups;
- supporting lifelong learning across formal, non-formal and informal systems.

Overall insight:

Inclusion, especially of youth, women and informal workers, is both a design feature and a success factor. Green skills initiatives that intentionally embed equity considerations achieve stronger community uptake and more resilient outcomes.

4.6 Scalability, Systemic Gaps and Opportunities for ACQF

Scalability Strengths

All six cases demonstrate scalable elements:

- Low-cost, community-based models (Kenya, Mozambique, Gambia).
- Standardised and globally recognised curricula (CLP).
- Modular content adaptable to local needs (TWESEP, Blue Florest).
- Potential for integration into NQFs and ACQF frameworks.

Systemic Gaps Identified Across Cases

- Financing constraints for scaling green skills programmes.
- Gaps in TVET infrastructure, especially in rural areas.
- Weak coordination across sectors, limiting uptake of lessons.
- Lack of formal recognition of community and indigenous competencies.
- Limited labour-market intelligence to inform curriculum updates.
- Fragmentation between national policy intentions and on-the-ground practice.

These gaps mirror findings from ACQF green-skills studies and TVET greening guidance, which highlight:

- low alignment between training supply and green job demand;
- inadequate embedding of environmental learning outcomes;
- limited availability of practical training facilities in many countries.

Opportunities for ACQF

The cross-case analysis points to clear areas where ACQF II can add value:

- Develop continental guidelines on greening qualifications, drawing on these cases.
- Support Member States to integrate RPL, micro-credentials and indigenous knowledge into NQFs.
- Strengthen labour-market intelligence systems, building on the ACQF job-postings dashboard.
- Promote intra-Africa peer learning, particularly for community-led and youth-driven models.
- Provide capacity building for TVET institutions on competency-based green curricula.

5.0 RECOMMENDATIONS

This section translates the lessons from the six cases and wider ACQF work on greening skills into practical recommendations for key stakeholder groups. The aim is to support scalable, system-level change while remaining grounded in what is already working on the ground.

5.1 For Continental and Regional Bodies (ACQF II, AUC, RECs)

1. Develop a continental guideline on greening qualifications and programmes

Use the six documented cases, together with examples such as Zimbabwe's greening TVET reforms, to draft a practical guideline on how to embed green learning outcomes, RPL and micro-credentials into qualifications frameworks and curricula. This reflected in the ACQF Concept on Defining Green Skills and Green Qualifications in Africa.

2. Strengthen continental labour-market intelligence on green skills

Build on the ACQF green-skills dashboard (279 green skills, rising demand in multiple countries) to produce periodic "Green Skills Outlooks" that inform policy, qualification design and donor programming.

3. Facilitate Intra-Africa peer learning platforms

Create structured peer-learning cycles where initiatives like Blue Florest, GreenCoal, CLP localisations and school-based programmes share tools, curricula and assessment approaches with other countries and RECs.

4. Position youth-led and community-based practices within ACQF governance

Ensure that student and youth organisations (such as AASU) have a standing role in ACQF green skills working groups and reference processes, reflecting the fact that many innovations originate from youth and community actors rather than central ministries.

5.2 For National Policymakers and Qualifications / QA Authorities

1. Embed green competences in NQFs and sectoral qualification

Review existing qualifications in priority sectors (energy, blue economy, tourism, agriculture, waste and circular economy) to integrate green competences and environmental learning outcomes as mandatory components, drawing on the competency models evident in the six cases.

2. Institutionalise Recognition of Prior Learning (RPL) for green skills

Use models from Mozambique and The Gambia to design RPL pathways that recognise local ecological knowledge, informal recycling, artisanal renewable-energy work and community conservation practices. Link RPL outcomes to NQF levels and progression routes into TVET and HE.

3. Align national green-skills strategies with ACQF II

Where climate or green-growth strategies already exist, explicitly link them to NQF reforms and ACQF referencing exercises, so that green jobs policy is backed by credible, portable qualifications.

4. Provide incentives for providers and employers to green programmes

Introduce funding windows, competitive calls or recognition schemes for institutions and companies that:

- integrate green modules in programmes;
- pilot micro-credentials;
- develop joint industry–TVET curricula in green sectors.

5. Integrate informal and community actors into policy processes

Involve cooperatives, youth groups, CSOs and community enterprises (like GreenCoal and Blue Florest) in national skills councils and sector skills bodies, to ensure policies reflect real local practice.

5.3 For TVET Institutions, Universities and Training Providers

1. Move from “add-on” environmental topics to outcomes-based green curricula

Use the practical activity sets from TWESEP, CCI, Blue Florest and GreenCoal as examples of how to define concrete green learning outcomes and associated assessment tasks (tree nursery management, coastal monitoring, waste valorisation, etc.).

2. Adopt competency-based, modular and micro-credential approaches

Develop short, stackable modules (e.g., “Biochar production basics”, “Mangrove restoration techniques”, “Circular RMG practices”) that can be combined into full qualifications and recognised under the NQF and, where relevant, ACQF.

3. Integrate community and workplace learning systematically

Formalise school–community and TVET–community partnerships similar to those seen in Kenya, Mozambique, Zambia and The Gambia, using workplace learning agreements and credit-bearing community projects.

4. Build staff capacity for green pedagogy

Use regional tools on greening TVET and ACQF's guidance on learning outcomes to train teachers and trainers in designing and assessing green competences, including transversal skills (systems thinking, problem-solving, collaboration).

5. Partner with employers around certification and CLP-type programmes

Universities and TVET institutions can integrate CLP or similar frameworks into induction, professional programmes and staff training, creating recognised micro-credentials that signal green competence to employers.

5.4 For Schools and Basic Education Stakeholders

1. Mainstream experiential environmental education across the curriculum

Scale school-based models like Eco Clubs, tree nurseries, reforestation campaigns and tourism/wildlife projects (as in CCI and TWESAP) into national curricula and co-curricular policies, with clear learning outcomes linked to competencies rather than one-off activities.

2. Provide structured support to teachers and eco-club mentors

Develop simple teacher guides and learning kits on climate action, circular practices and biodiversity, drawing on existing materials created by the case owners.

3. Connect school projects with local green-economy opportunities

Link school eco-clubs to nearby TVET colleges, conservation projects, waste-management facilities or green enterprises so learners can see pathways from school activities to real employment and entrepreneurship.

4. Track learning and progression, not just activities

Introduce basic tools (reflection logs, digital badges, certificates of participation) that can later support RPL and micro-credentials for students who continue in green fields.

5.5 For Employers, Industry Bodies and Chambers

1. Co-design green occupational profiles and standards

Work with NQF bodies and providers to define skills profiles for roles in renewable energy, blue economy, eco-tourism, circular manufacturing, waste management and climate services, drawing on labour-market evidence and the practical competences illustrated in the cases.

2. Support structured work-based learning and apprenticeships

Formalise partnerships with initiatives like GreenCoal, Blue Florest or TWESEP to offer placements, apprenticeships, mentoring and access to real work environments for learners.

3. Recognise micro-credentials and RPL outcomes in recruitment

Accept CLP certificates, community RPL outcomes and micro-credentials as valid evidence of competence during recruitment and promotion processes, especially for entry-level and youth roles.

4. Invest in joint innovation projects

Co-invest with training institutions in pilots that test new technologies (e.g., low-cost pyrolysis, digital coastal monitoring, circular product design) and integrate them into curricula.

5.6 For Youth Organisations, CSOs and Community-Based Initiatives

1. Continue to act as innovation laboratories for green skills

Youth and community organisations should keep piloting new models (eco-clubs, circular enterprises, blue-economy training, climate-education campaigns), documenting processes and outcomes to feed into NQF and ACQF discussions.

2. Systematise data collection and evidence

Strengthen monitoring of participation, skills acquired, jobs created, income changes and environmental impact, so that practices can be more convincingly recognised as "good practices" by policymakers and funders.

3. Engage in structured policy dialogues

Use coalitions (e.g., national youth councils, environmental networks, student unions) to engage ministries and qualifications authorities on RPL, micro-credentials and funding for green-skills initiatives.

4. Build intra-Africa alliances

Connect with peers across countries (e.g., CCI–TWESEP–GreenCoal–Blue Florest) to exchange toolkits, curricula and advocacy strategies.

6. CONCLUSION

The six practices documented in this Book of Good Practices illustrate that Africa's green transition is already taking shape through diverse, context-responsive approaches that integrate education, livelihoods, innovation and environmental stewardship. Although they vary in scale, sector and institutional setting, from school-based eco-clubs in Kenya to micro-enterprise circular models in The Gambia, from blue-economy skills in Mozambique to internationally recognised climate-literacy certification in Nigeria, they all demonstrate that the greening of skills and qualifications is both feasible and already underway across the continent.

A core insight emerging from the cases is that Africa's green-skills ecosystem is being built from the ground up. Youth organisations, community groups, schools, CSOs and small enterprises are pioneering practical, experiential learning models that complement and enrich formal systems. These models are not peripheral: they produce measurable environmental, social and economic outcomes, and they align closely with continental priorities on green growth, decent work, climate resilience and inclusive development. The initiatives also reveal the immense potential of Recognition of Prior Learning (RPL), micro-credentials, and competency-based approaches to expand access to qualifications and strengthen pathways for marginalised groups, including informal workers, women and rural youth, areas strongly emphasised in ACQF II.

At the same time, the cross-case analysis highlights systemic gaps that must be addressed if these innovations are to reach their full potential. Fragmented policy implementation limited formal recognition of skills acquired outside the classroom, constrained financing for green-skills programmes and weak institutional capacity in TVET systems remain significant challenges. These findings echo broader ACQF and AU assessments that call for stronger labour-market intelligence, policy coherence and qualifications reforms to support Africa's green and digital transformation.

The recommendations presented in this report offer a practical roadmap for continental bodies, national policymakers, qualifications authorities, TVET institutions, schools, employers and youth organisations. They emphasise the importance of embedding green competences into NQFs and curricula, institutionalising RPL and micro-credentials, scaling community-based pedagogies and creating structured mechanisms for peer learning across countries. Taken together, the practices and recommendations in this Book demonstrate that Africa possesses not only the urgency but also the ingenuity, leadership and technical capacity needed to build a skilled, climate-conscious and future-ready workforce.

Ultimately, this Book of Good Practices reinforces a simple but powerful message: Africa's green transition will succeed only if it is people-centred, education-driven, and grounded in the realities of learners, workers and communities. By drawing insights from what is already working on the ground, and by aligning these innovations with ACQF principles of mobility, transparency and recognition of learning, the continent can accelerate the development of a qualifications ecosystem that empowers young Africans to thrive in a green and sustainable future.

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