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Brief

FCDO Pan-African Team:

**Climate Mitigation and Adaptation Solutions in Africa –
Micro, Small and Medium Enterprises (MSMEs)**

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TOWARDS CLIMATE RESILIENCE

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Introduction

In the context of a rapidly changing climate and growing international climate finance (ICF) commitment, FCDO requires a better understanding of the role of micro, small and medium enterprises (MSMEs) in contributing to climate change adaptation and mitigation in the African context, and guidance on identifying relevant MSMEs. To develop such an understanding, FCDO contracted the Climate Mainstreaming Facility (CMF) to deliver an *Overview of climate mitigation and adaptation solutions for micro, small and medium enterprises (MSMEs) in Africa* and developed the guidance note *Identifying climate solutions for micro, small and medium enterprises (MSMEs) in Africa*. The current brief was developed to support the communication and reach of the above two outputs, and to highlight the key role that MSMEs play in addressing Africa's climate mitigation and adaptation challenges. The brief also discusses how these MSMEs may be identified.

Overview of climate adaptation and mitigation solutions used in Africa

The *Overview* highlights the importance of MSMEs for Africa's economy and the significant role they play in addressing the continent's climate mitigation and adaptation challenges. MSMEs represent more than 90% of African businesses, employing 60% of the continent's workforce. MSMEs are at significant risk from the impacts of climate change, to which they need to adapt and build resilience. MSMEs could also contribute to mitigation efforts, since they operate in high GHG-emitting economic sectors.

MSMEs can contribute to **mitigation** solutions across sectors. In the **Energy** sector, MSMEs can adopt fuel switching to renewables and energy-efficient practices, and provide services to other MSMEs to help them convert to renewable energy. In the **Agriculture, Forestry and Other Land Use (AFOLU)** sector, there is high mitigation potential (57% of total emissions in Africa) that MSMEs can support. The *Overview* notes that MSMEs are particularly well positioned to support the midstream of the agriculture sector's value chain (wholesale, logistics and processing) and input markets (fertilisers, breeding and development of seeds) by adopting energy-saving technologies and practices. In the **Transport** sector, MSMEs support urban micro-mobility where capital investment needs are lower. For example, in Sudan electric rickshaws are used to transport people and goods, allowing users to adapt to the economic shock of fluctuating fuel costs. In the **Construction** sector, MSMEs employ innovative business models using local waste management to upcycle and recycle products as low-cost building materials.

MSMEs are also well positioned to provide the technology and services needed to facilitate **adaptation**. Adaptation solutions for **Agriculture and Food** systems can include:

- **enabling solutions**, such as climate information and risk management services;
- **wider food, value chain and livelihood solutions**, including climate-resilient infrastructure (e.g., cold storage and drying equipment), information services and technology to link small-scale producers to value chains, and the reduction and management of food loss and waste; and
- **on-farm productive landscape solutions**, including sustainable water and land management, and landscape restoration, livestock management, soil management and diversification of crops and livestock.

In the **Forestry sector**, MSMEs can support forest protection by diversifying livelihoods into non-timber forest products. MSMEs also have a role in **Ecotourism** or **Nature-based Tourism**, where revenues from ecotourism support livelihoods while protecting biodiversity and ecosystems, and increase communities' resilience to shocks. MSMEs can also play a role in the upstream and downstream stages of **Water** resource management and disaster risk reduction. MSMEs could help remove non-native trees to increase water production from watersheds, as foreign species may draw more water than indigenous species. Markets could be created for felled wood to incentivise the clearing of non-native trees.

The feasibility of MSMEs to deliver on mitigation and adaptation solutions

The adaptation and mitigation solutions that could be provided by MSMEs may not always be feasible, because of obstacles faced such as **access to capital, technical capacity, policies and regulation**, and **social and cultural considerations**. For example, manufacturing, mining and transportation are capital-intensive sectors that are generally too expensive for MSMEs. Resource-intensive sectors (in terms of information, time, skills and financing needed) would limit access to MSMEs, although these barriers may be overcome given the right support and incentives.

MSMEs may have limited ability or interest in delivering adaptation solutions due to low levels of understanding of climate change risk to their businesses and poor policy environments. The **barriers can be lowered** by the government, which could support adaptation by providing **incentives for investments**, promoting the **dissemination of knowledge to businesses**, and supporting **policy reform**. Unclear policies could discourage attempts to adapt by MSMEs. Intellectual property rights could limit technology transfer, lack of reform in forest-based industries could exclude the implementation of novel mitigation and adaptation solutions, and land use policy that promotes crop monoculture can hinder crop diversification. Beyond financing and technical limitations, social dimensions must be considered to support adaptation by MSMEs. Social factors such as tradition, gender and age could influence people's response to an adaptation strategy. For example, implementing compost toilets have had limited use as they are seen as undesirable because of poor alignment with cultural views and norms around sanitation and hygiene.

Identifying climate adaptation and mitigation solutions for MSMEs

This brief highlights the *Guidance Note's* process for the user to identify climate adaptation and mitigation technologies, products and services offered by African MSMEs, and compliance with the UK climate spending eligibility requirements. This brief and the *Guidance Note* are intended for use by UK government personnel interested in green growth initiatives in the private sector to support greater design and implementation of ICF-eligible green growth programmes in Africa.

To identify relevant adaptation and mitigation MSMEs, the guidance uses a climate taxonomy approach. The climate taxonomy approach was informed by desktop research and relies on the Adaptation SME Accelerator Programme (ASAP) Adaptation Solutions Taxonomy, a taxonomy specifically developed for SMEs in low- and middle-income economies.

The guidance applies a five-step process to identify the adaptation and mitigation MSMEs, services, products and sectors (**Figure 1**). The process can be used for due diligence to identify MSMEs eligible for climate finance (starting at Steps 3 or 4) and to design support programmes around them to scale up and accelerate mitigation or adaptation activities in specific economic sectors.

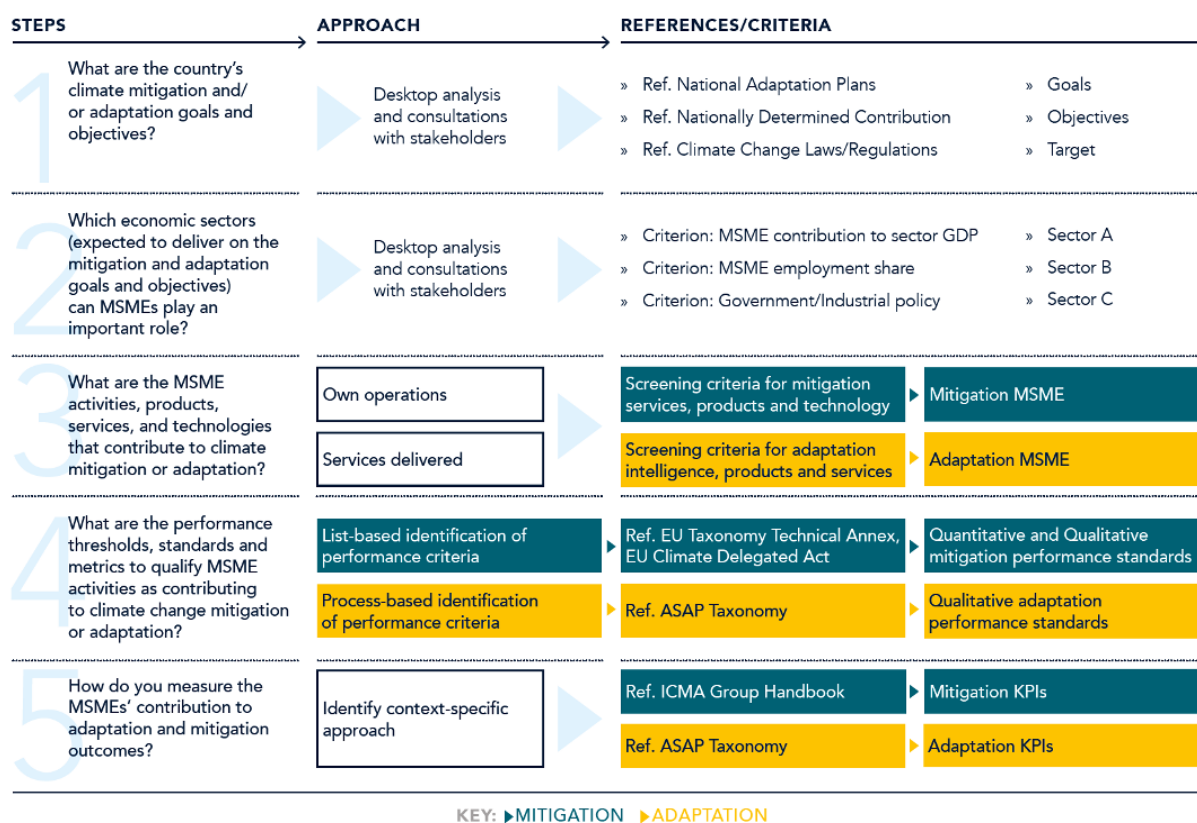


Figure 1: Five-step process to identify adaptation and mitigation MSMEs, services, products and sectors.

Note: Steps outlined in green are meant for mitigation MSMEs while steps outlined in yellow are for adaptation MSMEs.

Step one: Identify a country's climate mitigation and/or adaptation goals and objectives.

The user can refer to national strategies, policies and plans to identify a country's climate change mitigation and/or adaptation goals, objectives and targets and provide a Paris Alignment check.

Step two: Identify economic sectors that are expected to deliver on the mitigation and adaptation goals and objectives in which MSMEs play an important role.

The user can use a desktop research approach to identify the role played by MSMEs in decarbonisation and adaptation in prioritised economic sectors. Determining the importance could be based on the MSMEs' contributions to the sector's GVA/GDP, on the share of employment the MSMEs generate over the sector, or on the country's total employment. A defined threshold of, for example, 15-20% could be used as a metric.

Step three: Screen MSMEs that contribute to climate change adaptation or mitigation through their activities.

It is important to consider whether the MSME activity, product, service or technology is an **enabling activity** or an **own performance** activity. **Figure 2** below illustrates the difference between these two concepts.

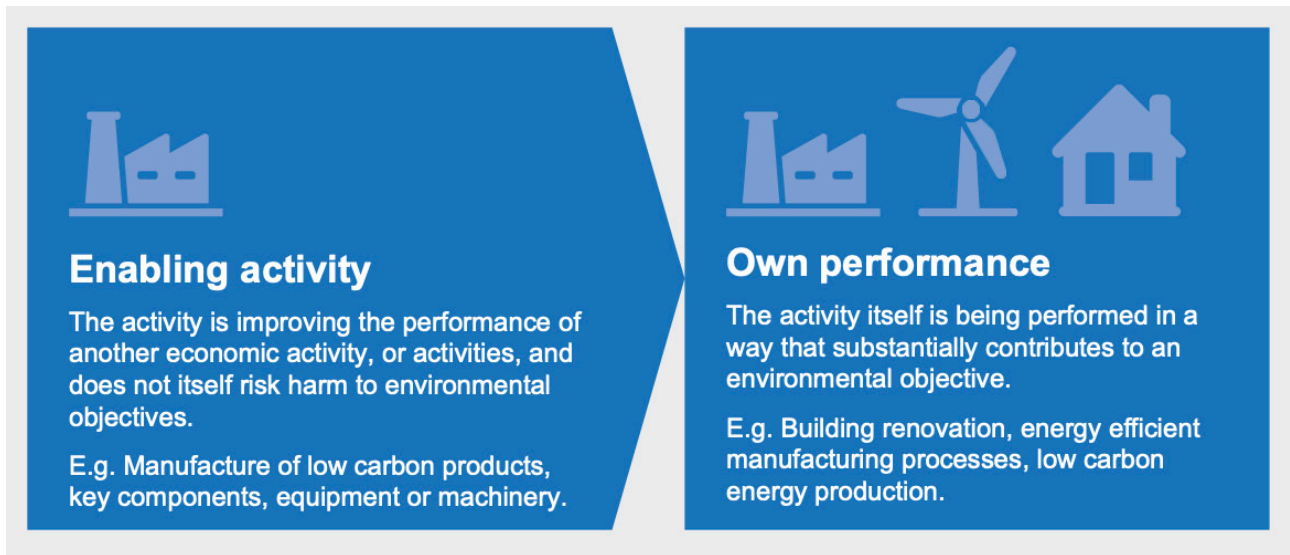


Figure 2: Activities enabling adaptation (or mitigation) and activities contributing to adaptation (or mitigation) based on own operations (Source: TEG (2020a: 15))

Step four: Identify technical criteria (standards, metrics and thresholds) for activities to be considered climate aligned.

Climate **adaptation** is location and context specific. There is no exhaustive list of technologies, products and services that may be considered to contribute to adaptation in all circumstances. Identifying the performance criteria of an adaptation activity needs to be process based. The user can assess:

- the climate hazards (e.g., heavy precipitation);
- the key risks to biological and physical systems (e.g., floods);
- human and managed systems (e.g., reduction in water availability, quality and security, and the spread of waterborne diseases); and
- the adaptation that the activities identify or address (e.g., flood data, models and scenarios for decision making, geosynthetic products for flood control).

A list of performance eligibility criteria for **mitigation** activities is possible because a reduction of CO₂ equivalent has the same impact, regardless of where the activity takes place. A key reference is the EU Taxonomy's performance criteria based on the mitigation target of net-zero by 2050.

Step five: Measure the MSMEs' contribution to adaptation and mitigation outcomes.

Climate **adaptation** MSMEs can be measured by applying a results framework/theory of change to think through the identified key performance indicators (KPIs) or metrics to measure. Adaptation MSMEs require a context-specific approach to identify KPIs to measure adaptation benefits. This provides a link to FCDO's ICF KPIs.

Climate **mitigation** MSMEs can be measured using the *ICMA Group Handbook on Harmonized Framework for Impact Reporting*. The Framework provides a list of core mitigation KPIs for related sectors. The list is not exhaustive; additional ancillary KPIs to capture activities enabling mitigation may need to be developed. These can also be aligned with FCDO's ICF KPIs.

Reporting using FCDO's ICF KPIs

All programmes spending ICF should report against all applicable ICF KPIs annually. Programmes are strongly encouraged to identify ICF KPIs and report against these. Identifying indicators from the FCDO climate indicator bank is also possible, but these are not collected or reported on. There are 11 active ICF KPIs (Table 1) that programmes and projects report against.

Table 1: UK's active ICF Key Performance Indicators

KPI	Indicator
1	Number of people supported to better adapt to the effects of climate change
2	Number of people and social institutions with improved access to clean energy
4	Number of people with improved (climate) resilience
6	Greenhouse gas emissions reduced or avoided (tCO ₂)
7	Clean energy capacity installed (MW)
8	Deforestation avoided (hectares)
10	Ecosystem value protected (GBP)
11	Public climate finance mobilised (GBP)
12	Private climate finance mobilised (GBP)
15	Extent to which ICF intervention is likely to have a transformational impact (scorecard)
17	Hectares of land that have received sustainable land management practices

ICF counts directly funded interventions, which raises challenges of whether certain adaptation and mitigation activities should be counted as *enabling activities* and *own performance* (see Step three). In Table 2 below, the ICF KPIs are proposed for reporting MSMEs delivering on their own mitigation operations, mitigation enabling activities, and adaptation enabling activities.

Table 2: Proposed ICF KPIs to measure mitigation and adaptation activities

Mitigation own operations	<p>KPI 2 - Number of people and social institutions with improved access to clean energy</p> <p>KPI 6 - Greenhouse gas emissions reduced or avoided (tCO₂)</p> <p>KPI 7 - Clean energy capacity installed (MW)</p>
Mitigation enabling activity	<p>KPI 11 - Volume of public finance mobilised for climate change purposes as a result of ICF</p> <p>KPI 12 - Volume of private finance mobilised for climate change purposes as a result of ICF</p> <p>KPI 15 - Extent to which ICF intervention is likely to lead to transformational change</p>
Adaptation enabling activity	<p>KPI 4 - Number of people with improved (climate) resilience</p> <p>KPI 11 - Volume of public finance mobilised for climate change purposes as a result of ICF</p> <p>KPI 12 - Volume of private finance mobilised for climate change purposes as a result of ICF</p> <p>KPI 15 - Extent to which ICF intervention is likely to lead to transformational change</p>

Mitigation own operations, where the activity itself contributes to climate change purposes, are feasible for MSMEs to measure and report on, with KPI 2 and KPI 7 being direct accounting. In contrast, KPI 6 requires counterfactuals that can be easily identified.

Reporting on enabling activities presents the risk of double-counting. For example, a small company that provides maintenance services for solar panels makes it possible for the end-user to adopt a less carbon-intensive energy source. If the customer's GHG reduction is counted against KPI 6 as part of the enabling activity of the maintenance company, there is a risk that it will be double counted should the customer decide to report the emission reduction as its own performance.

Adaptation outcomes (enabling activity) are particularly challenging to report. For example, an MSME disseminating adaptive intelligence and reporting against KPI 4 'number of people with improved (climate) resilience' might find it challenging to count users of the knowledge, especially if the knowledge outputs are non-exclusive, reaching an uncertain number of people. In the case where the ICF KPI does suit an activity, KPI 4 requires the establishment of baselines and progress updates through surveys and other data collection methods. This is an onerous reporting process in which MSMEs may not have the capacity to engage. This challenge could be addressed by integrating dedicated Monitoring, Evaluation and Learning support into the programmes aimed at MSMEs.

Conclusion

MSMEs are key drivers of employment creation and inclusive growth, are well placed to diversify in response to local demands, and have a pivotal contribution to make to climate change mitigation and adaptation. This brief highlights the overview of climate adaptation and mitigation solutions in Africa and the guidance to assess these solutions that can be delivered by MSMEs.