



# UNLOCKING YOUTH POTENTIALS FOR ARTICLE 6

A navigation through Ghana's Carbon Market Framework

February 2025

# Table of Contents

Overview	<b>2</b>
Key Messages for Policymakers	<b>3</b>
Introduction	<b>4</b>
What does the Carbon Market Mean for Ghana?	<b>5</b>
Overview of Article 6.2	<b>12</b>
Potential challenges in the implementation phase of the Carbon Market in Ghana	<b>15</b>
What is in it for the Youth?	<b>18</b>
Conclusion	<b>19</b>

# KEYWORDS

- Carbon Market (CM)
- Carbon Market Framework (CMF)
- Carbon Market Office (CMO)
- Greenhouse Gases (GHG)
- Environmental Protection Agency (EPA)
- Intergovernmental Panel on Climate Change (IPCC)
- Internationally Transferred Mitigation Outcomes (ITMOs)
- Metric Tons of Carbon dioxide Equivalent (MtCO<sub>2</sub> eq)
- Mitigation Activity (MA)
- Nationally Determined Contributions (NDCs)
- Paris Agreement (PA)
- Sustainable Development Goals (SDGs)
- Voluntary Carbon Market (VCM)



As the world strives for a sustainable and resilient future, Ghana's Carbon Market Framework (CMF) emerges as a strategic instrument, intertwining climate action with economic prosperity. Designed to operationalize Article 6.2 of the Paris Agreement, Ghana's CMF provides a structured pathway for the country to leverage carbon market mechanisms to accelerate emission reductions while driving sustainable development. The framework is instrumental in positioning Ghana as a key player in the global carbon market by creating an enabling environment for investment, technology transfer, and climate finance mobilization.

Ghana's commitment to reducing greenhouse gas (GHG) emissions, as outlined in its Nationally Determined Contributions (NDCs), requires innovative financing mechanisms. The CMF enables voluntary cooperation with international partners through Internationally Transferred Mitigation Outcomes (ITMOs), creating an avenue for emissions trading and project-based carbon credit generation. This approach is expected to unlock climate finance that will be reinvested into green initiatives, including renewable energy, climate-smart agriculture, and afforestation programs.

Beyond its role in emissions reduction, the CMF presents a significant economic opportunity for Ghana's youth. With an emphasis on capacity-building, entrepreneurship, and innovation, young people can engage in carbon market activities by developing projects, offering technical services, or contributing to monitoring, reporting, and verification (MRV) processes. However, for this potential to be fully realized, it is imperative to address existing barriers such as limited awareness, technical expertise gaps, and regulatory uncertainties.

This policy brief highlights the critical considerations for Ghana's carbon market framework, emphasizing the need for robust governance, community engagement, and private sector participation. It also underscores the importance of clear policy guidelines, risk management strategies, and equitable benefit-sharing mechanisms to ensure long-term sustainability and maximize climate and economic benefits for all stakeholders.

# Key Messages for Policymakers

Young people are strongly advocating for strengthened capacity building on Article 6 and Ghana's regulatory framework.

Clarify concerns on Cooperative Approaches (Article 6.2) by Addressing potential risks and costs associated with the development, implementation, and sustainability of the carbon market framework.

De-Risking Ghana's Carbon Market (CM) and Management of Currency Risk in Bilateral Agreements: Given Ghana's volatile exchange rate dynamics, it is imperative to assess and manage potential currency risks in bilateral agreements for stable transactions of ITMOs.

The framework must include provisions to engage local communities involved in mitigation actions, enabling them to benefit financially from community-led initiatives. This engagement should extend beyond improving community resilience and advance co-benefits from the carbon market framework.

Identifying and addressing potential risks and challenges for both the state and participating organizations/groups in implementing the carbon market framework is crucial for successful adoption and credit generation.

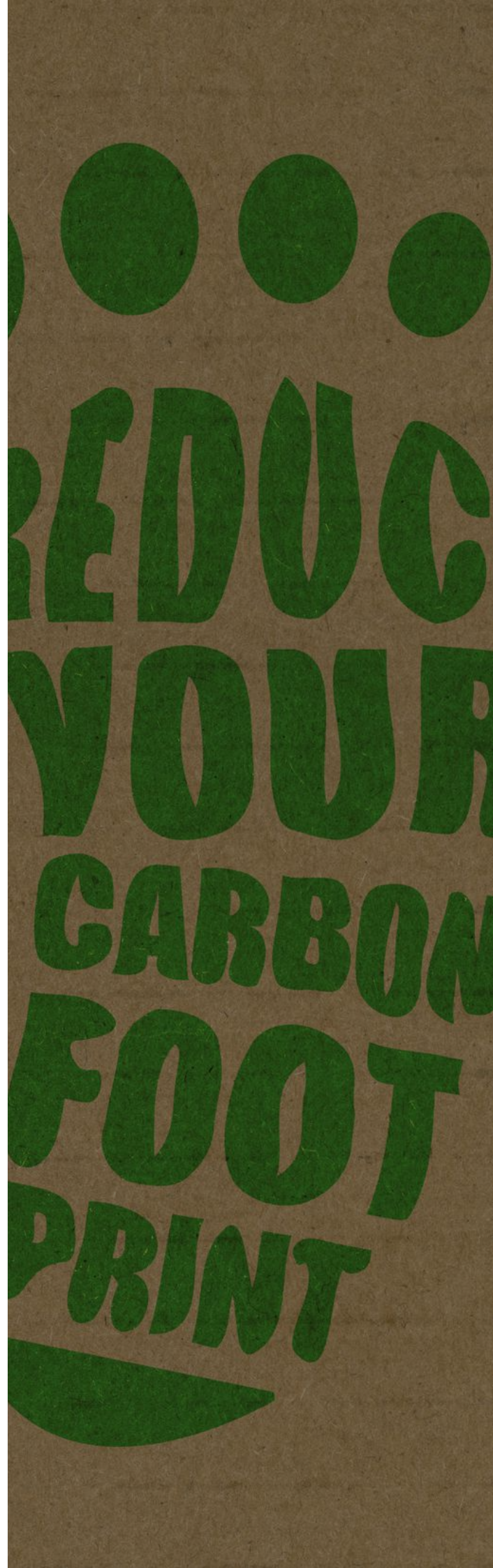
Balanced Incentives and Long-term Viability: Striking a balance between incentivizing benefits of emissions reduction and ensuring the long-term economic viability and financial sustainability of projects.

Leverage existing research efforts by youth groups on the carbon market to enhance national stocktaking, reporting, and NDC targets.

A robust monitoring and evaluation strategy must be established to ensure transparency and accountability in project implementation, aligning with the principles outlined in the Article 6.2 cooperative approach.

Reinvestment of proceeds from the CM to climate action in Ghana.

Investment in intensive training on carbon credit accounting and key technical expertise lacking across Africa to facilitate voluntary carbon market deals that ensure the overall economic and environmental prosperity of the people; and to build community climate resilience.



# Introduction

## 1.1 Background

There is an accelerated international recognition that climate change is a grave threat to human wellness and environmental integrity. Climate change is no longer merely one of many environmental and regulatory problems; it has long since stopped being a scientific interest (VijayaVenkataRaman et al., 2012). Based on the IPCC (2023) report, it is now more evident that the world's climate is changing due to human activities that influence the rising levels of greenhouse gasses in the atmosphere. The impacts of climate change keep increasing with each rise in Global temperature, and the impacts are unequally distributed with vulnerable countries such as developing countries and small islands being affected the most. These impacts have put a huge stress on governments across the world to respond quickly to climate change in order to attain sustainable and resilient economic development.

Like many countries, climate change has become one of Ghana's major concerns and issues to promote mitigation and adaptation actions while ensuring prosperity through livelihood protection has become increasingly important. Ghana, like most developing countries, is highly vulnerable to climate impacts, as these impacts are further aggravated by poverty, limited infrastructural development, malnutrition, and low institutional capacity amongst others (Ahenkan 2020). In addressing climate change and its impacts a number of mechanisms have been presented both globally and nationally. One of these mechanisms is using price-based instruments to enhance climate actions. In this context, the connections between finance and the environment are becoming more complex and an array of mechanisms are starting to be set in place, ranging from carbon market schemes to payments for ecosystem services, catastrophe bonds, biodiversity offsets, fossil fuel investments to sustainable infrastructure investment (Babon-Ayeng et al., 2022).

**Climate and conservation organizations interested in a win-win scenario where carbon is sequestered, ecosystems are protected, and poor land managers are rewarded through payments for carbon sequestration have taken notice of the potential synergy between carbon sequestration and poverty alleviation (Benessaiah, 2012).**

Li et al., (2021) posit that carbon trading presents an essential tool to enhance economic growth and meet mitigation ambitions. The reinvestment of revenue from carbon trading schemes is a major scaling of climate finance for vulnerable countries.

The Carbon market defines a remarkable era of innovation in the fight against the climate crisis as set by the Paris Agreement. The creation of adaptable market mechanisms built on the exchange of emissions permits was a key component of the Kyoto Protocol. Under the protocol, countries are obliged to meet their cut either by nationally adopted measures or gain credit from other means, reiterating the fact that it does not matter where the GHG is sequestered from, so far as it is removed, it helps the global ambition of carbon neutrality and net zero. Although the Kyoto Protocol has components of emission trading, the Paris Agreement under Article 6, regulates carbon markets and acknowledges that "*some Parties choose to pursue voluntary cooperation in the implementation of their nationally determined contributions to allow for higher ambition in their mitigation and adaptation actions*".

**In a carbon market scheme, a party gains an allowance by reducing carbon emissions far below its allowable cut, the market therefore provides a system where carbon credits are bought and sold.**

The carbon market operates under both mandatory/compliance schemes and voluntary programs. Mandatory national, regional, or global carbon reduction regimes lead to the creation and regulation of compliance markets. The ability for businesses and individuals to buy carbon offsets on a voluntary basis without using them for compliance purposes is provided through voluntary markets, which operate independently from compliance markets. In some cases, voluntary, unregulated organizations may purchase compliance offset market credits, however, voluntary offset market credits are not permitted to satisfy compliance market demand unless they are specifically admitted into the compliance regime (Herrmwile and Kreibich, 2017).



## What does the Carbon Market Mean for Ghana?

The African Carbon Market Initiative (ACMI) launched at COP27 highlighted the scale of transformation available for the carbon market mechanism. The market holds an opportunity to unlock billions of climate funds to support climate initiatives, enhance sustainable energy access, create jobs, protect ecosystems, and build resilient economies. The Carbon market mechanism presents a very huge possibility for Ghana to scale its mitigation outcome through internally generated climate finance. Ghana has a chance to raise funds through the carbon market to support its NDCs and encourage foreign direct green investment to help local businesses. With the carbon market, partnerships among nations are also growing. Ghana aims to use these partnerships to reach its 24 million tonnes conditional absolute greenhouse gas reduction objective (Carbon market framework. 2022).

The Carbon Market Framework Policy Consultation as organized by the Youth Climate Council Ghana, in collaboration with the Environmental Protection Agency (EPA) was to discuss Ghana's carbon market mechanism and the possibilities it holds in helping Ghana attain its NDCs as well as generate revenue for sustainable economic development. The focus of the consultation was to help young climate activists understand the Carbon Market framework, its concept, what it stands to achieve, how the youth can benefit from the framework, and even more importantly, it presented an opportunity for the youth to make input and also seek clarification on Ghana's Carbon Market framework (CMF).

Three types of Carbon pricing instruments (Based on the polluter pays principle, where to place the price, who to pay the price, and how that would instigate emission reduction).

**Carbon Taxation:** With Carbon taxation policies, the level of taxation is dependent on the level of emissions or carbon footprint of goods/services that are priced. The government of the local jurisdiction determines where to place the prices, so the price is placed by the government but the reduction is determined by the organizations. For instance, South Africa has adopted a carbon taxation measure.

**Emission trading schemes:** With this, the price is determined by the market but the level of reduction is determined by the authorities. It is a five-step process starting with the authorities setting the priority sector, authorities determining specific activities emitting the most, and an evaluation of the value chain to determine which industry can partake in the scheme, once this is established they are given a cap (this is based on historical emission, and this is given that you don't go above it), afterward these industries do 'surrendering' to the government. With this, if the organizations/industries are unable to meet this cap, they are allowed to buy allowances from other organizations with surpluses or by offsets outside their industry, thus creating a carbon market.

**Carbon Crediting Mechanism:** The onset of carbon offsetting created this new dimension. So the carbon crediting schemes are not under any local jurisdiction.

- *International Carbon Crediting Schemes created through International treaties such as the Kyoto protocol and Article 6 of the Paris Agreement (PA).*

- *Independent Carbon Crediting Schemes: This allows the private sector to invest to create carbon reduction that can be converted as offsets.*
- *Domestic Carbon Crediting Schemes: This is in jurisdictions that have domestic schemes, where others not directly within the scheme create offsets.*

## What is Ghana's situation?

After an assessment of the three carbon pricing instruments, Carbon Crediting proved the most feasible for the Ghanaian context. Ghana's Carbon Market Framework establishes a mechanism for the implementation of the carbon market and how to do that in accordance with international carbon crediting schemes.

This is first towards achieving Ghana's NDCs, while creating green jobs in the process. The framework follows Article 6, laying out the procedures for ensuring environmental integrity, avoiding double counting, sustainability, and ensuring digitalization through the carbon registry systems. The second part is creating the demand for carbon credit in Ghana, with a framework guiding how countries can gain credit from Ghana

### Different Actors in the Market

- ▶ Market Makers: Owners of projects/developers who are backed by investors.
- ▶ Credit Buyers (Sovereign buyers, Non-sovereign-buyers, and Carbon Brokers).
- ▶ Government regulators, to ensure that carbon trading meets international requirements.
- ▶ Verifiers and verification persons.





Any organization willing to gain carbon credits per Ghana's Carbon market framework must follow the authorization process to develop an eligible mitigation activity (MA).



**The scope of authorisation does not include mitigation outcomes from Ghana's unconditional mitigation projects as captured in the RED-LIST of Ghana's NDC.**

- Pre Authorisation for MA is included in Ghana's whitelist. Such activities would on request be given a letter of Assurance by Ghana's Carbon Market Office (CMO).
- Letter of Authorization would be given to eligible activities that produce Internationally Transferred Mitigation Outcomes (ITMOs).
- Development of mitigation activities as shown in Ghana's carbon market framework provides a standardized methodology to be followed for all mitigation activity development in Ghana. These step-by-step procedures are listed below:

- ▶ Mitigation activity developer and entity application
- ▶ Mitigation activity preparation
- ▶ Consideration of mitigation design activity document
- ▶ Independent assessment of mitigation activity
- ▶ Authorization and preparation of Article 6.2 Initial Report (AIR)
- ▶ Mitigation activity registration and reflection authorization status
- ▶ Implementation and Monitoring
- ▶ Verification and positive examination
- ▶ Issuance of Mitigation Outcomes (MO)
- ▶ Transfer, retirement and cancellation of ITMOs
- ▶ Payment of Settlement
- ▶ Adaptation Contribution
- ▶ Corresponding Adjustment
- ▶ Reporting: Ghana shall report on all generated ITMOs per obligation to international carbon market regulations. All transferred ITMOs would have a unique serial number by the Ghana Carbon Registry (GRC) to enhance easy tracking

## How Article 6.2 can support Ghana's climate goals and economic development.

According to the Updated Nationally Determined Contribution Under the Paris Agreement, (2021), Ghana seeks to mitigate an absolute 64 MtCO<sub>2</sub>eq by 2030. The 64 MtCO<sub>2</sub>eq represents 88% of Ghana's total emissions with a remaining 12% which translates to 9 MtCO<sub>2</sub>eq extra mitigation potential outside the scope of the NDC. The Article 6.2 on cooperative approach, promotes bilateral partnerships between Ghana and other parties to co-create and adopt a legally binding agreement in implementing the voluntary carbon market between them (Carbon Market framework, 2022).

**Ghana has since 2023 had 5 Government-to-Government (G2G) bilateral cooperative approaches with Ghana being the host country. The participating countries are Switzerland, Sweden, Singapore, South Korea and Liechtenstein.**

These partnerships provide great potential funding for Ghana's NDCs and support sustainable economic development. Redirection of such funds into green projects such as renewable energy and climate smart agriculture goes a long way to support local businesses. Additionally, the bilateral agreements under Article 6.2 promote technology transfer and capacity building, correlating to an enormous opportunity for Ghana to scale its capacity to attain economic resilience through innovation. Lastly, when funds are redirected to the energy sector and other climate sensitized areas, this can provide co-benefits, such as improved air quality, enhanced energy security, and reduced reliance on fossil fuels.

These co-benefits contribute to sustainable development, improving public health, and creating a more resilient and sustainable economy. For instance, in order to reduce methane emissions and enable more effective water usage, the ITMO project on sustainable rice farming is helping to train thousands of rice farmers in climate-smart agricultural practices.

**Work in Article 6 in Ghana looks super exciting already, with voluntary cooperation alone unlocking USD 850 million investments flow till 2030 (Article 6 Annual Progress report, 2023).**

## The role of the private sector in implementing Article 6.2 in Ghana

The ambitious goal of the Paris Agreement, as reiterated by the IPCC report (2023) of limiting global temperature to 1.5°C has translated into equally ambitious national NDCs across countries. In the case of Ghana, an ambitious climate action requires significant mobilization of financial flow from the private sector. Current public funds available to support developing countries' climate ambitions are very limited making leveraging private sector support very important. Ghana's conditional NDCs are very much dependent on such financial flows to achieve mitigation targets (Michaelowa et al., 2020). The development of Ghana's Carbon Market Framework was necessitated to translate the country's Carbon Market Strategy into concrete investment requirements (Ghana Carbon Market, 2022). Such national policy frameworks present functional arrangements to mobilize private sector contribution to MAs.

The private sector after clear guidelines through well-defined national policies can support the implementation of Article 6.2 in Ghana through several mechanisms. First, by engaging in carbon offsetting activities either as developers of mitigation activities or investing in the expansion and implementation of projects that create ITMOs.

Supporting initiatives that lower or eliminate Greenhouse Gas (GHG) emissions can aid the private sector in offsetting its emissions and aid Ghana in achieving its NDCs. For instance, investments in initiatives to stop deforestation, advance sustainable agriculture or support clean cookstoves.

The private sector can also facilitate or support the establishment of a robust carbon market infrastructure, which can enhance the effectiveness and credibility of Ghana's carbon market and reduce double counting. This can involve the development of trading platforms, registry systems, and verification procedures that enable the transparent and reliable transfer of ITMOs.

Furthermore, the private sector can support the provision of expertise and technical assistance in implementing emission reduction projects especially since capacity building according to Ghana's Carbon Market Framework (2022) is key for the implementation of Article 6.2 in Ghana.

Companies with experience in sustainable practices, clean technologies, and carbon management can offer valuable knowledge and resources to support the implementation of projects and ensure their effectiveness in reducing emissions. Capacity building on the voluntary carbon market is very important for young people in Ghana to scale their capacity to implement projects that generate mitigation outcomes.

## Main Highlight on Ghana's Carbon Market

- ▶ 38 Mitigation Activities under development
- ▶ 3 Activities Authorized
- ▶ 2 Voluntary Carbon Market (VCM) projects under development
- ▶ 5 Cooperative approaches



# Survey on Ghana's Carbon Market and Youth Participation

The survey explored the level of understanding of Ghanaian youth on Article 6.2, the knowledge gap in Ghana's Carbon Market Framework, the capacity needs, and the major challenges envisioned by youth in implementing Article 6.2 in Ghana under Ghana's CM framework.

**Figure 1: Level of knowledge of participants on a scale of 1-5 on Article 6.2 of the PA**

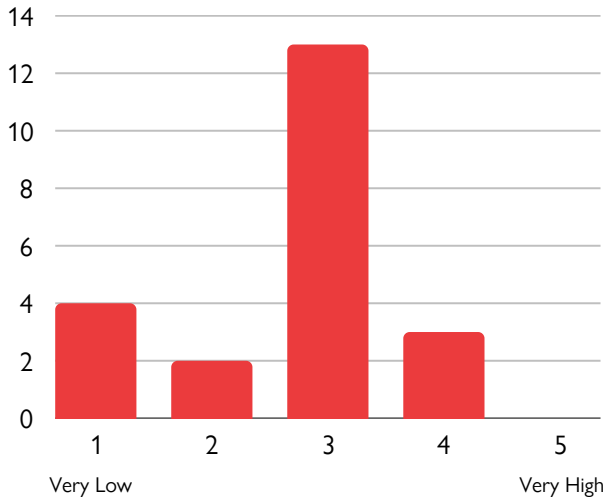


Figure 1 above shows the level of understanding of Article 6.2 with 1 representing very low understanding (entry level) and 5 depicting expert knowledge. From Figure 1 it can be concluded that the majority, which is 59.1% of the respondents, have a fair understanding of Article 6.2.

**Figure 2: CMF Sessions that requires Capacity building for full engagement in VCM**

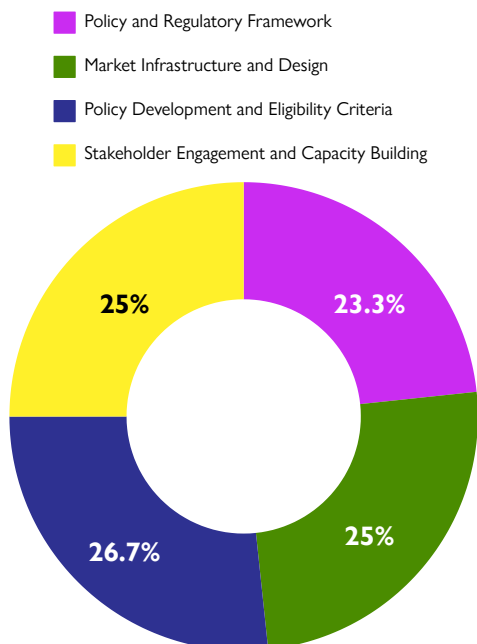
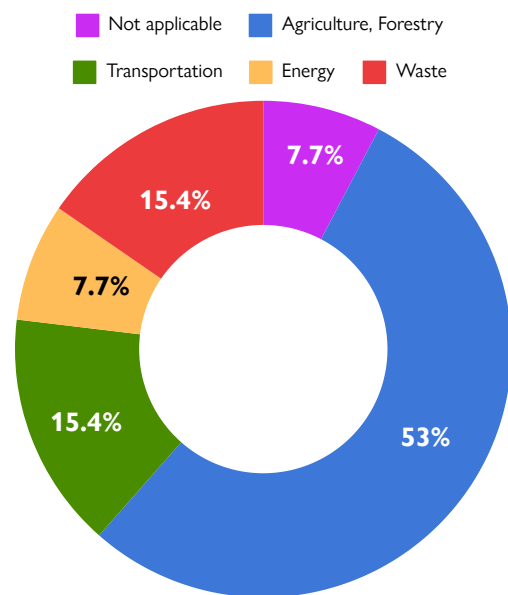


Figure 2 explores the main capacity training needed for the full optimization of opportunities in the carbon market. The results showed an interesting balance between top four themes as shown in figure 2.

**Figure 3: sectors under which young people are developing projects leveraging the CMF**



From Figure 3, it is clear that 53.8% of the 30 respondents interviewed are undertaking projects under Agriculture, Forestry, and Other Land Use (AFOLU) followed by 15.4% in transportation and Waste.

*The consultation sought to address and bridge the knowledge gap on Ghana's CMF. To tailor the consultation to the pressing needs of participants, the key areas of the CMF that need further understanding were assessed as shown in Figure 2. Lastly, respondents were asked about the current status of their projects under the carbon market and which sector the project is in; Figure 3, explained the various sectors of their projects.*

## Potential challenges envisioned by young people in the operationalization of the Article 6.2 in Ghana

- Limited access to continuous information on the carbon market.
- Political interference and ready market unavailability.
- Lack of cooperation among young people to solidify and scale projects.
- Difficulty in navigating the technicalities of the framework. There is a Lack of structured technical support to clarify such concerns.
- Competition from big corporate giants.
- Limited access to facilities and machinery to facilitate project development.
- Difficulty in accessing funding and grants to support the innovations of young people.
- Limited availability of baseline data and research on projects developed under the market to serve as a guide.

## Webinar Series on Ghana's Carbon Market Framework

The Carbon Market could be viewed as a climate-smart technology that seeks to reduce vulnerability or a set of interventions/policies that focuses on fiscal measures, that is an economic based instrument. The Webinar focused on fiscal measures/economic policies, delving deeper into Ghana's Carbon Market Framework, and breaking the technicalities down to bits that are useful to scale the innovations of young people. The essential conceptual linkage between Greenhouse Gases and the Cost of Climate Change were well elaborated; one of

the ways of placing a price on the cost of climate change is going to the root cause per the polluter pays principle. This connects the impact of climate change to the cost to society, this cost is the manifestation of climate change which is based on the extent of climate change which is also based on the extent of the release of greenhouse gasses. So in addressing climate impact, you have to address the release of greenhouse gasses. The Rationale behind carbon pricing policies is to place a price on the value of carbon.

**What should be the optimal price of carbon emission, and what solutions/innovations can reduce carbon emissions and get the price for the emissions?**



*"Climate action means nothing if the people we are working for do not see the reaping benefit of the work."*

**- Dr. Daniel Tutu Benefoh,**  
Environmental Protection Agency, Ghana.

*"Young people should bring the far reaching targets closer to us, to bring the target for 2030 to 2025, so that our lives are not wasted away."*

**- Enoch Yeboah Agyapong,**  
Renewable Energy Association of Ghana (REAG).

*"Leverage the opportunities in Ghana's CMF, through collaborations and partnerships to develop innovative projects that are both scalable and with high mitigation outcomes."*

**- Mr. Michael Abrokwa,**  
Klik Foundation, Ghana.



## Overview of Article 6.2

The Article 6 of the Paris Agreement (PA) stipulates that parties can engage in voluntary cooperation in the implementation of their NDCs, for a more ambitious mitigation and adaptation output to drive sustainable economic development and promote environmental integrity (Hattori et al. 2021). The outline of Article 6 highlights 3 types of mechanisms; the first one is under Article 6.2 which emphasizes the engagement of parties on a voluntary basis, under Article 6.4, engagement is under the guidance and authority of the Conference of the Parties serving as the supervisory body and lastly the nonmarket approaches explained under article 6.8. Basically, the cooperative approaches outlined in Articles 6.2 and 6.4 can produce and include the transfer of mitigation outcomes, or internationally transferable mitigation outcomes (ITMOs), among participating nations.

### Mechanisms for international cooperation under Article 6.2

The Paris Agreement (PA) recognizes that nations participating in a cooperative approach may use ITMOs to meet their NDCs under Article 6 paragraph 2 (Article 6.2). Article 6.2 also provides the general outlook for accounting and report submission on ITMOs based on bilateral agreements established by parties (Murun et al., 2021). The transfer and usage of ITMOs must follow sound principles of environmental integrity, transparency, and sustainable development. Mitigation activities (MA) that seek to gain carbon credits under the Article 6.2 cooperative approach have to demonstrate that the corresponding emission reduction would not have happened if not for the said project under the market-based mechanism (Michaelowa et al. 2019). Specific Article 6.2 participation requirements must be met by all nations.

In accordance with the Enhanced Transparency Framework, nations participating in cooperative initiatives under Article 6.2 are also subject to particular reporting and tracking requirements to avoid double counting. Applying "corresponding adjustments," which are necessary for all authorized carbon credits, is the primary method for avoiding double counting.

***"Making a corresponding adjustment means that when Parties transfer a mitigation outcome internationally to be counted toward another Party's mitigation pledge, this mitigation outcome must be 'un-counted' by the Party that agreed to transfer it." - Climate Focus***

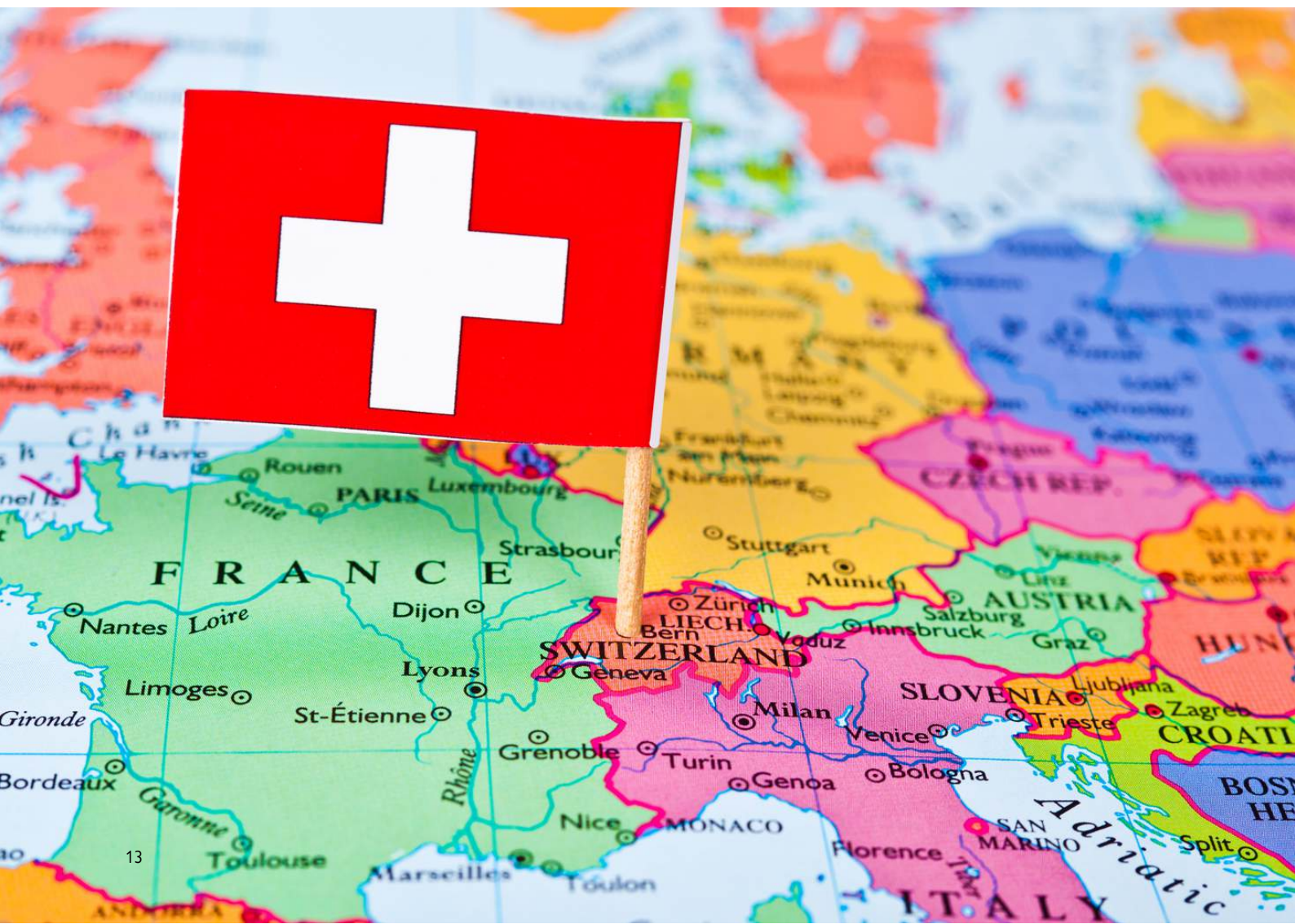
## Examples of successful implementation of Article 6.2 in other countries

Switzerland has been recognized as one of the early movers in the carbon market space and identified as a buyer of ITMOs. The number of bilateral agreements between Switzerland to test Article 6-aligned mitigating measures has increased substantially mainly with seller countries which are mostly developing nations (Aouane et al., 2022).

The operationalization of Article 6 by Switzerland aims to purchase ITMOs through the voluntary cooperative approach to meet its NDCs and support other countries by providing financial assistance for them to meet theirs as well (Meraji, 2021). Switzerland first submitted its Intended Nationally Determined Contribution (INDC) in advance of the PA setting the precedence for its early involvement in the operationalization of the Article 6 and recently updating its INDC to include strategic agreements with other countries regulated with binding frameworks.

By the end of December 2021, Switzerland had concluded bilateral agreements with Dominica, Peru, Ghana, Senegal, Georgia, and Vanuatu. The agreements specify the procedure for the corresponding adjustment and regulate the transfers of mitigation outcomes and their utilization. The ITMOs may be utilized for additional mitigation goals, such as private or subnational entities setting voluntary climate neutrality targets; however, these goals would not count against Switzerland's emission reduction goals.

The accords also preserve the environment, avoid duplicate counting, and specify certain conditions for the promotion of sustainable development, including the defense of human rights (Swiss NDC, 2021).

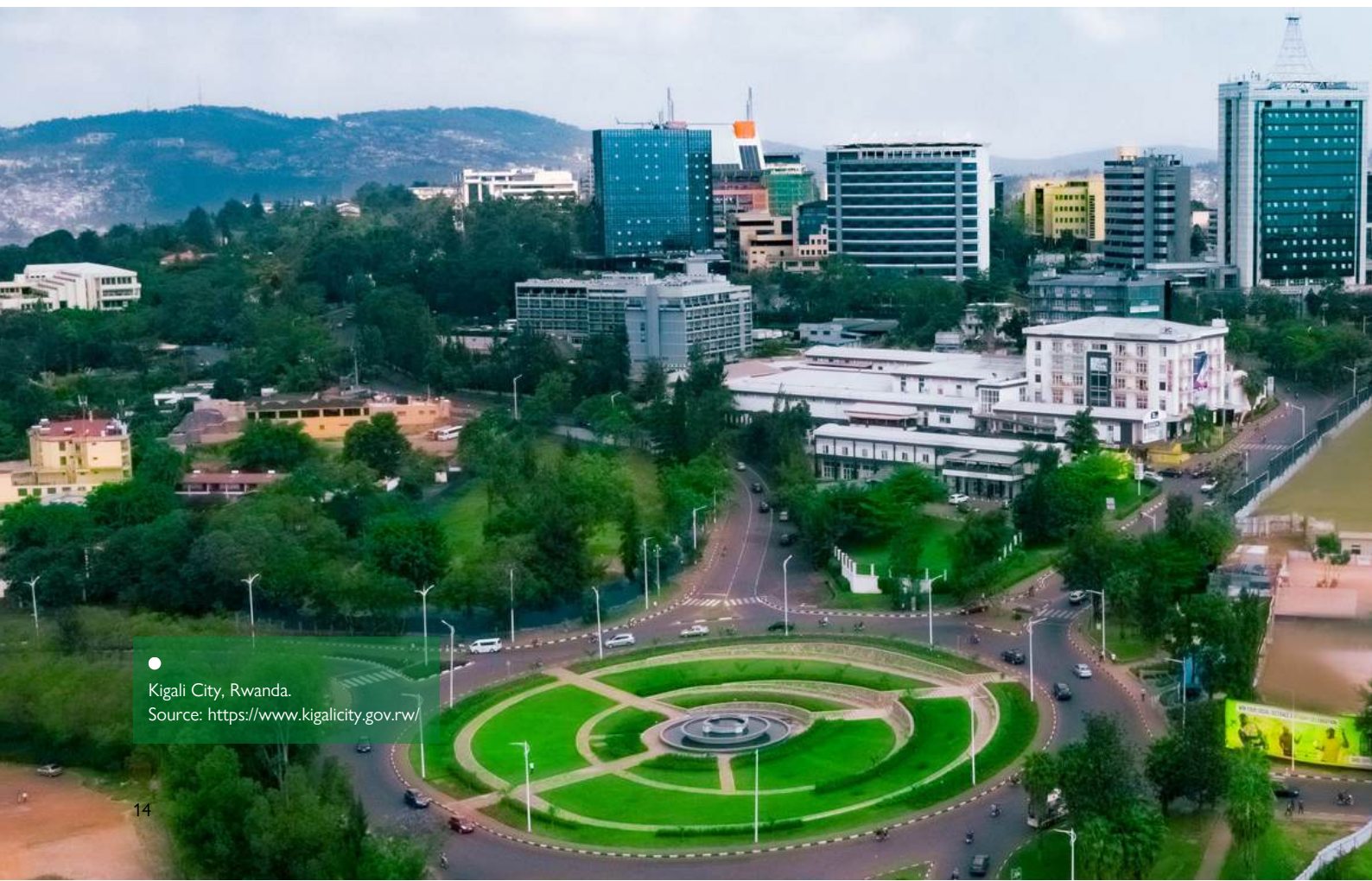


Japan is also one of the early movers in the operationalization of the voluntary carbon market far ahead of the Paris Agreement. The Joint Implementation Mechanism (JCM) was not intended to operate under the Kyoto Protocol, although drawing on the lessons and experiences of the Clean Development Mechanism (CDM), it was designed with a futuristic focus (Asian Development Bank, 2019). This new climate regime, which differs from the Kyoto Protocol in its architecture, was brought about by the Paris Agreement, which was later accepted in 2015. The Institute for Global Environmental Strategies report (2016) posits that the JCM is a bilateral mechanism initiated by the Japanese government to facilitate the transfer of low-carbon technologies and mitigation projects to enhance sustainable development in partner countries, acting as buyers under the market mechanism.

The JCM fits easily with the cooperative approach as discussed in Article 6 of the Paris Agreement as it complies with its key element: the transfer of ITMOs to meet a country's NDCs. The most notable aspect of the JCM may not be the cooperative strategy per se, but rather that Japan has begun this kind of cooperation far before the Paris Agreement. Japan intends to facilitate the attainment of its NDCs by reducing GHG

emissions by 46% in FY2030 from levels in FY2013; the JCM therefore seeks to reduce emissions for both Japan and countries engaged bilaterally. The operationalization of the JCM presents very crucial lessons that can guide international policies on environmental integrity and double counting for market approaches under the PA (Koakutsu 2016). Most countries are new to the implementation of Article 6, therefore a huge capacity gap, which can be a hindrance to the successful implementation of the market approach in such countries, mainly the seller countries.

Japan as the host of the Article 6 Implementation Partnership established at COP27, is devising measures to fill such capacity gaps to support a common understanding of the Article 6 rules, establish linkages with NDCs, and enhance “high integrity carbon market” (Cooperative Approaches or the Article 6.4 Mechanism, 2022). In line with this decision at COP27, the Ministry of Environment, Japan together with the Institute for Global Environmental Studies (IGES) hosted two conferences to discuss how to build government capacity to implement Article 6, establishing an institutional and governance framework for capacity building (CB) and identified gaps. The rules, structure, and guidelines governing accounting under the JCM have been identified to reduce the risk of double counting.



● Kigali City, Rwanda.  
Source: <https://www.kigalicity.gov.rw/>



# Potential challenges in the implementation phase of the Carbon Market in Ghana

## Threats to Ghana's success in Operationalizing Article 6.2 on the voluntary Carbon Market

The youth consultation on Ghana's framework on carbon markets and non-market approaches identified some key threats as potential inhibitors to a successful implementation of the voluntary carbon mechanism in Ghana.

- **Capacity Building and Infrastructural Development**

It is commonly acknowledged that carbon market participants, particularly those in developing nations, need to invest in capacity building (CB) to comply with the new standards and regulations for carbon markets and to take full advantage of associated opportunities. Drawing experiences from the Clean Development Mechanism (CDM) under the Kyoto Protocol, many Sub-Saharan African countries including Ghana had low expertise and capacity to approve CDM projects and even develop such projects, also low CDM awareness among funding institutions all contributed to low CDM

project implementation rates and success of developed projects (Ahonen et al. 2022). Likewise, low capacity and knowledge of Article 6.2 project development and a detailed understanding of the carbon market mechanism remain a major challenge for most people interested in developing projects under the carbon market framework.

***Ahonen et al. (2022), elaborates that in such bilateral cooperation between developing countries and developed countries who are mostly buyers of ITMOs, the buying countries tend to almost always take the lead role which is a major limitation to the capacity development of developing countries.***

Infrastructure development is a major component to facilitate tracking of mitigation activities and avoid double counting. A robust infrastructure with modern technologies would enhance monitoring, reporting, and verification (MRV) of mitigation outcomes at various levels (national, sectoral, activity level) and tracking progress towards NDCs achievement. The lack of such systems in Ghana would be a huge challenge in the initial stages of implementing the Carbon market in Ghana.



- **Economic instability**

Ghana's economic instability is currently a major challenge for all project developers and would likely be a success inhibitor, especially during the early stages of implementing the carbon market. Ghana is highly dependent on external support, thus, economic development is highly vulnerable to the least shock, such as climate change. Despite the opportunities in operationalizing Article 6.2, Ghana's economic status and the volatility of the cedi is a challenge for the successful implementation of projects that can generate mitigation outcomes. Also, private sector engagement which is the backbone of the voluntary cooperation in Article 6.2 is impaired due to the higher risk of investing in an unstable economy. Fan and Tian (2016), assessed that economic dynamics are closely associated with the complexities of operationalizing the carbon market. The potential implications of currency risk on the bilateral agreement between Ghana and receiving countries can hinder the implementation phase given the volatile exchange rate dynamics within the country.

- **Monitoring, reporting, and Verification**

Ghana would need to set up effective procedures for monitoring, reporting, and compliance to guarantee the legitimacy and integrity of the carbon market. This would entail creating a methodology for calculating and verifying emission reductions, creating a register for tracking carbon credits, and putting compliance and enforcement measures in place. Ghana may require expenditures in technology, data gathering, and quality assurance procedures to improve its monitoring and reporting capabilities. Such initial expenditures may pose a challenge to the operationalization of the carbon market under Article 6.2.

- **Lack of Institutional Coherence and law enforcement**

Institutions are the bedrock for effective implementation of climate policies. Frictions between various ministries have hindered the operationalization of a number of environmental/climate-related policies in Ghana. Ahmed et al., (2022) highlighted the impact of fragmented institutional arrangements on the achievement of policy objectives in Ghana. The National Assessment Report On Achievement Of Sustainable Development Goals And Targets For Rio+20 Conference (2012), also indicated that the lack of strong institutional leadership and synergies is a major limitation to policy implementation success in Ghana.

- **Insufficient baseline data and robust research system**

Crediting baselines establish the standard by which the amount of mitigation performed is assessed, setting a reference level of GHG emissions to be used in calculating the maximum amount of carbon credits that can be issued under Article 6 of the Paris Agreement. According to Michaelowa et al., (2021), an Article 6 compatible baseline setting requires in-depth knowledge of which international cooperation's principles should be operationalized, the theoretical principles constitution, and the necessary requirements to implement them in practice. Baseline setting informs the eligibility criteria, other boundary settings, and how or whether a 'corresponding adjustment' should be conducted, thus, a need for thorough due diligence and research prior to baseline setting. Baseline data on environmental quality according to Alemawgi et al., (2007) is patchy and scanty even at the various research institutes limiting the evaluation of trends, impacts, and accurate reporting in Ghana.

## Challenges Faced by Young People on Article 6.2 and Ghana's Climate Mitigation Framework

- **Lack of capacity, expertise, and guidance on Article 6.2**

Lack of capacity on how to develop projects that can generate mitigation outcomes is an inhibiting factor in the full realization of the benefits of Article 6.2 cooperative approach in Ghana. Besides efforts by youth-focused CSOs, little capacity building/training workshop sections have been organized by the government to enhance the innovative potential of youth in Climate Mitigation projects. The framework has a huge ability for job creation, poverty reduction, and improving ecosystem services in Ghana, yet, there have not been any developed strategies under Ghana's carbon market framework to train young people on Article 6.2 in accordance with the bilateral agreements between Ghana and other parties. There is no purposive strategy to help reduce unemployment among the youth through training in proposal writing and project creation methodology.

- **Technicalities in the Framework are not fully understood and explored to aid implementation**

The majority of young people in the climate space, although eager to gain capacity and be able to leverage opportunities presented by initiatives such as the CMO, lack an understanding of the approach and mechanism established in the CMO for Ghana. Many think that Ghana's framework has a lot of technicalities making it very complex and difficult to grasp, hence advocating for continued engagement sessions such as the policy consultation to educate the youth on the carbon market framework. Through the policy consultation's post-survey, it was evident that the lack of understanding is a key inhibitor to the ability of young people to engage effectively in the CMO.

- **Market Volatility and uncertainty**

The risk in developing projects under Ghana's carbon market, particularly due to the recent notable scale in inflation, threatens the development of projects by

young people. From the consultation, financial institutions expressed concerns that the carbon market has not been fully de-risked making investment in the sector very difficult. The uncertainties within the carbon market framework scare young people from fully participating and engaging in the sector.

- **Insufficient data and information on Ghana's bilateral projects and implementation strategy**

The details of ongoing projects are mostly not available to the public to facilitate research on the implementation process, progress, success, and drawbacks. Such information is important to spur interest and deepen understanding for young people to implement their own projects, drawing inspiration from the successes while learning not to repeat the setbacks. The consultation highlighted the low research publications on projects under the carbon market to guide young people.



• Photo by  
[Keira Burton on Pexels.com](https://www.pexels.com/photo/young-woman-and-young-man-reading-together/)

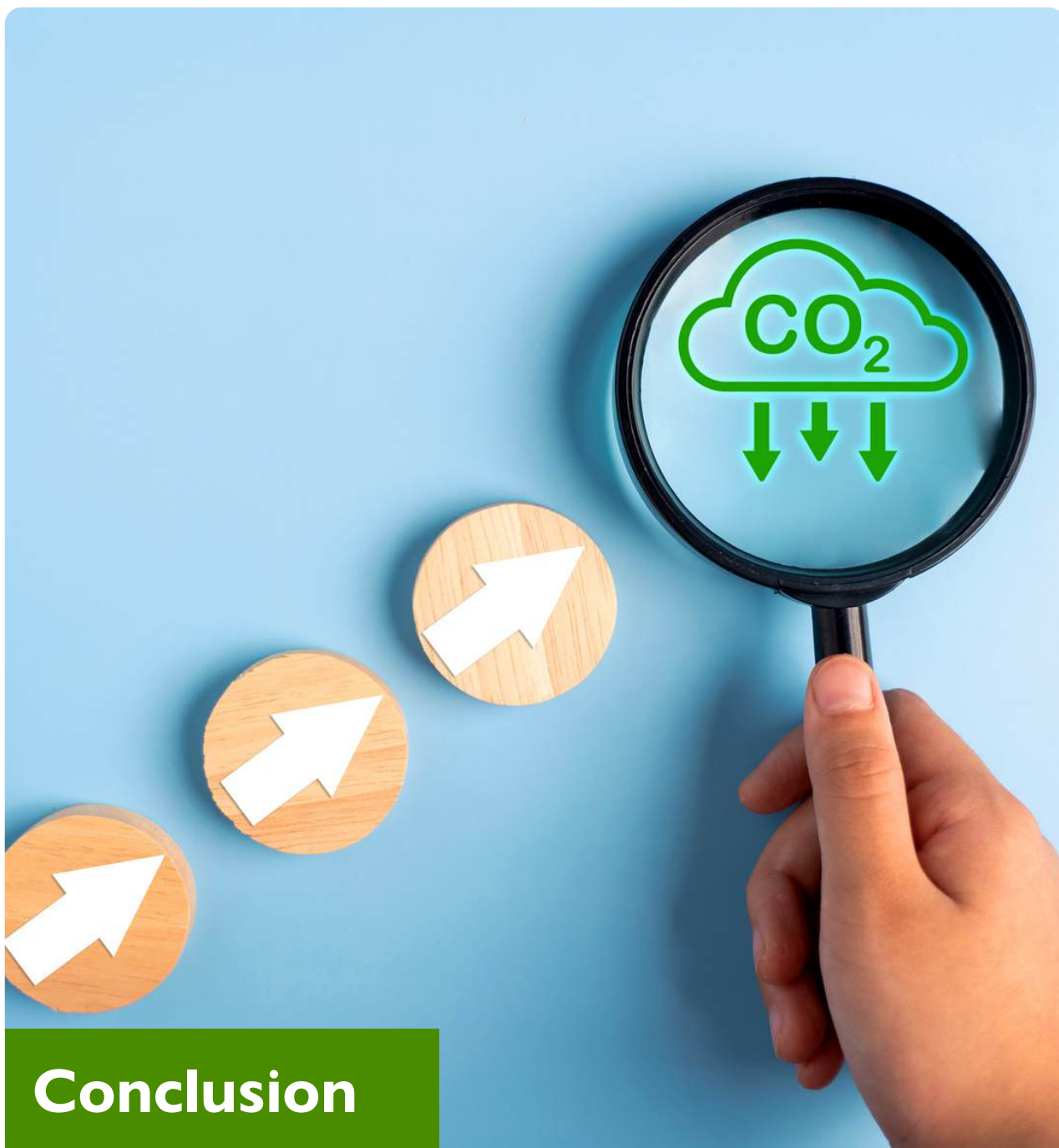


## What is in it for the Youth?

The role of the youth is enormous; young people can develop their own projects, provide services for other developers (serving as brokers, baseline data generators, etc), create platforms to facilitate payments to private sector or developers, deploy digital monitoring to enhance discreet collection of data and carbon market advocacy.



*Plus, there's oodles of room for everyone to squeeze in!*



## Conclusion

Ghana's Carbon Market Framework presents a pivotal opportunity to align climate action and economic development with meeting Ghana's commitments on its NDCs. The engagement of young climate activists, as well as the clarification of concerns surrounding cooperative approaches and currency risk, are essential for its success.

The framework's potential to empower local communities and incentivize emissions reduction must be carefully balanced with long-term viability and economic stability. Learning from successful implementations in other nations, especially in terms of private sector involvement, can guide the effective engagement of Ghana in the voluntary carbon market.

To overcome challenges, continuous capacity building, technical development and assistance, robust infrastructure for MRV, institutional coherence, and active youth participation must be prioritized. By addressing these aspects, Ghana can unlock the potential of the carbon market to achieve its climate ambitions while fostering economic resilience and environmental integrity.

## References

Ahenkan, A., 2020. Financing climate change mitigation: An assessment of the private sector investment opportunities in Ghana. *Business Strategy & Development*, 3(1), pp.143-150.

Ahmed, A., Akanbang, B.A.A., Poku-Boansi, M. and Derbile, E.K., 2022. Policy coherence between climate change adaptation and urban policies in Ghana: Implications for adaptation planning in African cities. *International Journal of Urban Sustainable Development*, 14(1), pp.77-90.

Ahonen, H.M., Michaelowa, A., Kessler, J., Singh, A., Samaniego, X. and Espelage, A., 2022. Capacity building for Article 6 cooperation: The way forward.

Asian Development Bank, 2019a. Article 6 of the Paris Agreement: Drawing Lessons from the Joint Crediting Mechanism. <https://www.adb.org/publications/article-6-paris-agreement-lessons-jcm>

Crook, J., 2022. COP27 FAQ: Article 6 of the Paris Agreement explained. *Carbon Market Watch*.

Fan, X., Li, S. and Tian, L., 2016. Complexity of carbon market from multi-scale entropy analysis. *Physica A: Statistical Mechanics and its Applications*, 452, pp.79-85.

Ghana's Carbon market framework, 2023. Operational guideline for Article 6.2 cooperative approach in Ghana (Vol.1), pp. 1-136.

Hermwille, L. and Kreibich, N., 2017. Identity crisis?: voluntary carbon crediting and the Paris Agreement (Vol. 2016). Wuppertal Institute for Climate, Environment and Energy.

Li, Z., Wang, J. and Che, S., 2021. Synergistic effect of carbon trading scheme on carbon dioxide and atmospheric pollutants. *Sustainability*, 13(10), p.5403.

Murun, T., Hattori, T. and Umemiya, C., 2021. Evaluation of options for reporting under Article 6.2 of the Paris Agreement.

VijayaVenkataRaman, S., Iniyar, S. and Goic, R., 2012. A review of climate change, mitigation and adaptation. *Renewable and Sustainable Energy Reviews*, 16(1), pp.878-897.

**Authored by:** Priscilla Nyamekye Appiah, Maria Azul

**Edited by:** Dr. Daniel Tutu Benefoh, Dr. Antwi-Boasiako Amoah, Joshua Amponsem

**Designed by:** Rhodoline Tetteh-Narh, Julia Korsah Hayford, Muzzafar-Din Essel



Telephone: +233 30 394 2829  
Email: [info@youthclimatecouncil.com](mailto:info@youthclimatecouncil.com)  
Website: [www.yccghana.com](http://www.yccghana.com)