المملكة المغربية +هXHAX+ I MEYOXO Royaume du Maroc

MINISTÈRE DE LA TRANSITION ENERGETIQUE ET DU DEVELOPPEMENT DURABLE - DÉPARTEMENT DU DEVELOPPEMENT DURABLE -



Gold Standard[®]

وزارة الانتقـــال الطـــاقـــي والتنميــــة المستدامــــة -قطـــاع التنميـــة المستدامـــة-+اه8@ه+ XIX + XIX + 828 + 828 -- +اه8@ه+ XIX + 0088 -

"Morocco's Experience in International Carbon Markets: Readiness and Operationalization of Article 6 "

05.12.2023

united Nations

MINISTÈRE DE LA TRANSITION ENERGETIQUE ET DU DEVELOPPEMENT DURABLE





Gold Standard[®]



- Welcome & Intro: International Carbon Markets in The MENA Region
- Presentation 1: Morocco's Experience With Carbon Markets and Article 6 – Where Do We Stand?
- Presentation 2: NDC Financing and Article 6: Mobilizing Public and Private Finance Through Carbon Markets
- Panel 1: Article 6 Readiness From Article 6 Roadmap to The Implementation of Article 6 Activities Focused On Project/Programme-based Mitigation Activities (Sectoral Approach)
 Panel 2: Operationalizing Article 6 New Policy Approach
- Panel 2: Operationalizing Article 6 New Policy Approach Mechanisms and Methodologies to Drive Scale in Article 6 Carbon Markets.
- Q&A Discussion & Closing





Setting the Scene: International Carbon Markets in the MENA Region

AXEL MICHAELOWA

michaelowa@perspectives.cc Dec, 2023







- Share of MENA in Article 6.2 bilateral agreements
- Share of MENA in Article 6 pilot activities
- Frontrunner countries



COP28



Share of MENA in bilateral Art. 6 agreements

- 4 MENA countries out of 39 host countries globally (10%) have concluded bilateral agreements
- 9 out of 65 bilateral agreements (14%) involve MENA countries





Share of MENA in Art. 6 pilots (incl. JCM)

- 1 activity out of 136 Article 6 pilot activities globally (0.7%) is located in the MENA region
- 7 out of 20 MENA countries (35%) state in their NDC that they want to use Article 6
- > Huge gap between interest and actual piloting!



MENA Others

COP28

Article 6 users Others



- Morocco
 - Bilateral agreements with Switzerland, Singapore and now Norway
 - Article 6 capacity building support by multiple donors (GGGI/Norway, GIZ, UNDP)
 - Innovative policy crediting approach under development



• UAE

- Both seller (Japan) and buyer (Liberia, Tanzania, Zambia, Zimbabwe)
 - Focus of acquisition on forestry credits, 1.5 million km² of forest land under contract







Thank you!

AXEL MICHAELOWA

Research Director

michaelowa@perspectives.cc



المملكة المغربية +•XHV2+ | Royaume du Maroc

MINISTÈRE DE LA TRANSITION ÉNERGÉTIQUE ET DU DÉVELOPPEMENT DURABLE



وزارة الانتقال الطاقي والتنمية المستدامة +•C•U•O+I%C8++≤ I+¥E•Q+ ∧ +XC≤+•O%N•I+

Art 6.2 Morocco case

"Side Event on Morocco's experience in international carbon markets: Readiness and operationalization of Article 6"

DUBAI, UAE, 5 December 2023

National Context : Strategic projects related to Climate



Updated NDC of Morocco - ambitious mitigation objectives





27,2%

objectif conditionnel

27 actions conditionnelles This platform involve all departments and institutions concerned by the implementation of the revised NDC of Morocco (including measuring, reporting and verification for the 7 sectors of the NDC)

The expected institutional arrangements related the ETF in Morocco will specify, through a **regulatory framework**, the responsibilities and roles, interactions, procedures, to effectively operationalize this platform.



Morocco relies on its experience with the Clean Development Mechanism (CDM) and seeks to enhance its readiness for the market to support its efforts in mitigating greenhouse gas emissions and facilitate the deployment of clean technologies. Projects under CDM: a portfolio of 37 projects, of which 16 have been registered. Morocco also intends to pilot a carbon market instrument based on its experience with Nationally Appropriate Mitigation Actions (NAMAs) credited.

16 Projects CDM registred in Morocco

- 14 projects in the 1st periode of Kyoto Protocol Engagement
- 2 Projects registred in the seconde period of KP Engagement

5 Projects generate CERU in Morocco

- Period)
- Essaouira Wind Project (1st period)
- Akhfennir Wind Farm Project (2nd Period)
- Jbel Sendouq-Khalladi School Wind Farm Project (2nd period)

Tetouan Wnd Farm Project for the Lafarge Cement Plant (1st Commitment

Haouma Wind Farm Project, developed by NAREVA HOLDING (2nd period)

8 projects will be transferred to article 6.4.

- Tetouan wind turbine project for the Lafarge cement factory
- Tangier wind project
- Marrakech wastewater treatment plant with biogas recovery for cogeneration
- Switching from fuel oil to plant biomass at Lesieur Cristal Limited Corporation
- Ouarzazate concentrated solar project
- Jbel Sendouq-Khalladi ("Khalladi") wind project in Morocco
- Heat recovery and transition from natural gas to biomass residues implemented at the Renault Tanger Méditerranée (RTM) plant - Melloussa, Morocco
- Landfill gas recovery, reuse and disposal project from the new Fez landfill site
- Biogas recovery and electricity production from the M'zar wastewater treatment plant, Morocco

Cooperation under Article 6 / Paris Agreement

Morocco voluntarily engages in Article 6.2 Cooperative Approaches (MoU with Singapore, Switzerland, Norway, South Korea and others on-going : Japan...),



Switzerland

• The Organic Waste-to-Energy (OWtE) Program • Energy Efficiency

Program

→An implementation agreement signed was between and Morocco Switzerland in Egypt during COP27



Norway

• DAPA/GGGI: Designing the Policy Approach for Article 6

MoU \rightarrow between Morocco and Norway signed on the 2nd of December 2023 – COP28



Singapore

• collaboration under Article 6/carbon market

MoU between \rightarrow Morocco and Singapore signed in July 2022



South Korea

The Global Agreement Environment and on Climate Change (2022) provides for activities under Article 6

Cooperation under Article 6 / Paris Agreement			
The project approach	The Programme of Activities (PoA) approach	Political Approach	
Foundation for Climate Protection and Carbon Offset Klik South pole	First Climate Foundation for Climate Protection and Carbon Offset Klik	NORWEGIAN MINISTRY OF CLIMATE AND ENVIRONMENT	
Energy Efficiency in the Industry and Tourism Sectors	Energy Valorization of Organic Waste	DAPA Program Designing the Policy Approach for Article 6	
Phase MADD (Mitigation Activity Design Document)	 MADD is implemented. Two pre-feasibility studies are conducted (under the GCF Readiness program). Seeking funding to initiate the feasibility study (including data analysis for developing a business plan, identifying the project owner, conducting environmental impact assessments, etc.) and to cover other sites 	 MoU signed with Norway in Decmber 2023 Study on cost estimation of implementation and financial flows for the selected policy approach ready by the end of 2023 Legal consultancy preposed to support Morocco in Collaborative approaches Private sector engagement and public consultation under the DAPA program Preparation of the Bilateral Agreement and later on signature of the MOPA (Mitigation Outcomes Purchase Agreement. 	

Renewable Energy and Energy Efficiency

Law 40-19 amending and supplementing Law 13-09 on Renewable Energies (EnRs)



Secteur 'energie renouvelable:

- Cadre legislatif reglementaire pour l'engagement du secteur prive pour l'atteinte des objectifs energetiques.
- Cadre institutionnel et reglementaire pour le 1 developpement de l'hydrogene vert.
- Loi sur l autoproduction (droit a un certificat d origine pour le producteur prive)
- Cadre institutionnel qui regit les ER, projets PPA, IPP.
- Cadre pour les projets realises dans le prive.
- Cadre pour les projets d autoproduction
- Annonce de la capacite d accueil du reseau national.

Efficience energetique

- Loi 47/09
- Decret en cours
- Cert. credits carbone, ppa signe avec entite americaine





Law 82-21 on self-generation of electricity

Main phases and key elements of engagement under Article 6 can be outlined as follows:

- Engagement & Conditions of participation
- Strategic engagement decisions under Article 6
- Guidelines on institutional options for the core processes of Article 6
- Key institutional functions and roles in the engagement of Article 6
- National planning -
- Activity cycle within the framework of Articles 6.2 and 6.4.
 - Key institutional and governance provisions
 - Management of bilateral agreements
 - Credit mechanism
 - Monitoring of transactions and activities

Options for the assignment of roles, composition, and key institutional mandates

- Existing capacity and experiences to leverage for cooperation under Article 6
- Institutional risk management in the planning implementation of NDCs and Article 6

and

Mitigation Actions Assessment Protocol for International Transfer Readiness (MAAP-ITR)

* Neyen: Evaluation Protocol for Mitigation Measures for International Transfer Readiness (MAAP-ITR) to maximize readiness for international market mechanisms under the Paris Agreement.

The tool aims to assess the institutional framework and infrastructure needed to participate in international carbon markets.

Transparency \rightarrow

The tool assesses the progress made in strategic planning within mitigation strategies

\rightarrow <u>Prevention of double counting</u>

The tool assesses the processes and infrastructure in place to avoid double counting.

\rightarrow Alignment of mitigation activities with the NDC

The tool assesses whether the mitigation activities used for cooperative approaches are aligned with the NDC

\rightarrow Environmental integrity

The tool assesses the establishment of processes to ensure the rigor and integrity of NDC targets and objectives.



Mitigation Actions Assessment Protocol for International Transfer Readiness (MAAP-ITR)

1. Data Collection: Gathering relevant documents for the assessment, including those describing frameworks, legislation, and other structures related to international transfer readiness.

Document and data gathering **Development of final** Desk review & initial reports with identified MAAP ITR tool draft capacity gaps **MAAP ITR** Presentation of reports Feedback gathering to country counterparts, from country governments feedback integration 20 Final MAAP ITR assessment. development of presentation materials

4. A final assessment of the MAAP-ITR will be produced, incorporating feedback received from counterparts. Presentation materials will also be created to be shared with the government.

6. A revised version of the report will be sent to counterparts. This final report is completed by incorporating comments from all counterparts, including the final scores from the MAAP-ITR tool, and a final recommendation for technical assistance activities

5.A draft report will be finalized and shared with UNDP and government counterparts. The agreed technical assistance activities will be integrated into this report.



2. A preliminary review was then conducted. The gathered documents will serve as a foundation for developing an initial version of the MAAP-ITR tool.

3. Sharing the initial version of the MAAP-ITR tool with the government for comments and confirmation of the results. Initial activities of technical assistance are then discussed as a means to enhance the level of preparedness and the outcomes of subsequent assessments.

Morocco's Article 6 Framework for International Carbon Market

The UNDP/South Pole provides technical assistance for an Exhaustif, adaptable framework that captures all opportunities. This Framework is designed to provide detailed guidance on how the country can implement Article 6.2 in a transparent, effective, and equitable manner :

Framework outline

General structure



Activity Cycle



Eligible mitigation activities for authorization



Mitigation activities eligible for authorization

Defining project eligibility criteria for Morocco - different approaches



 Activities that conflict with environmental and human rights conventions ratified by the buying country. Project by project basis

Can be determined by the Moroccan government through the assessment of individual projects that meet eligibility criteria and that do not fall under the country's negative list

(up to Morocco to decide if other projects not in the positive list may be assessed or not)

Institutional Arrangements

Specific government bodies have been designated for various roles, such as the Ministry of Energy Transition and Sustainable Development hosting the Article 6 Office (A6.OF).

Institutional Arrangements

Proposed institutional chart of Article 6.2 dedicated bodies



Oversight Body:

Provides long-term oversight and policy guidance for the implementation of Article 6. Such a body could play a crucial role in ensuring the effectiveness, transparency, and integrity of the cooperative approach under Article 6 of the Paris Agreement

plays a unique role in the day-to-day management of the implementation of Article 6.2. Among its functions, it is responsible for:

Technical Advisory Unit:

A6.TAU (Article 6 Technical Advisory Unit) serves as the central hub for technical expertise and knowledge sharing among countries participating in cooperative approaches.

Article 6 Office (Article 6.2 Operations Entity):

Authorizing mitigation activities;

Receiving declarations from participating countries;

Recording mitigation activities;

Issuing and transacting emission reduction units.

Existing international registries

National registry solutions



National registry solution (1) New UNDP Platform for Voluntary Bilateral Cooperation (already used by Vanuatu) Fully functional national registry with a scalable modular approach.

- Allows for registration as a validator/verifier and as developer.
- Modular configuration with ITMO flows built with a personalized configuration for each country.
- Country-personalized configurations include: consultations, prototyping and configuration with UI (no new implementation needed).



Emerging solution Climate Action Data Trust (CAD Trust)

- Developed by the WB, IETA, Singaporean government and other stakeholders. 0
- Through blockchain technology, itv facilitates a peer-to-peer connection among decentralised registries.
- Provides visibility into corresponding adjustment procedures and the lifecycle of carbon offsets. 0
- Publicly-available information on MOs and record status changes. 0

Morocco would like to start using the UNDP register and, eventually, move on to the development of a national registry.

Capacity Building

Training session at MTEDD in March 2022;

Training sessions on Governance, Institutional Arrangements, and Negotiations & MOPA in July 2022 (attended by multiple ministries and public institutions);

Training sessions on Article 6, Carbon Market Governance, and Negotiation of a Mitigation Outcome Purchase Agreement (MOPA) in March 2023.

UNDP, Neyen, South Pole

GGGI



Training sessions on Article 6 and Carbon Market Governance.



Takeaways and lessons learned

- **Collaborate with international organizations and partners**, as Morocco is doing with UNDP, GIZ, GGGI, NDC-P, UNEP..., to receive financial support and technical expertise in implementing Article 6.
- Periodically review and update the policy framework to align with evolving international standards and best practices. Morocco wants its strategy to be more flexible & adjustable overtime to cover future opportunities.
- Invest in **building the capacity of domestic institutions** to oversee and implement Article 6 effectively & enhance readiness, awareness, and technical knowledge among relevant national stakeholders
- Morocco's experience in matter of article 6.2 can serve as a reference for other nations looking to navigate the complexities of implementing it and leveraging international carbon markets to achieve their climate goals.
- Although, effort is yet to come in matter of article 6.4 and Morocco is looking for all form of collaboration to enhance its participation in this regard.



Next Steps

Continuation of ongoing activities

Just Transition (GiZ)



Thank you for your attention

Rachid Tahiri

Head of Climate Change Ministry of Energy Transition and Sustainable Development

NDC financing and Article 6: mobilizing public and private finance through carbon markets

Side Event "Morocco's experience in international carbon markets: Readiness and operationalization of Article 6 "

Tuesday, 5 December, 1:15 – 2:45 PM (GST, local time), UNFCCC Side Event Room 5

Anselm Duchrow, GIZ-Morocco

المملكة المغربية +.XXALE I HEYOEB Rovaume du Maron



وزارة الانتقال الطاقسي والتنمي SES++2 I +XE.Q+ A +XE2 +.OSH.I+ MINISTÈRE DE LA TRANSITION ENERGETIQUE ET DU DEVELOPPEMENT DURABLE DÉPARTEMENT DU DEVELOPPEMENT DURABLE







AGENDA NDC financing and Article 6: mobilizing public and private finance through carbon markets

- How big is the finance gap? 1.
- Elements of the financing strategy 2.
- Role of article 6 and challenges 3.









NDC Morocco - Financing gap

NDC 2021-2030 – Cost estimates

Estimated costs in bi US\$ (rounded)	Mitigation	Adaptation
Conditional	21	n.a.
Non-conditional	17	n.a.
total	38	40

- \rightarrow In the last decade around 1,3 bi US\$ have been invested per year (private and public); almost 10 bi US\$ would be needed
- \rightarrow However: the NDC financing needs might be severely underestimated (results of the NDC Financing Strategy-GCF) Readiness programm); total costs could go beyond the annual GDP of the country (2022 = 134 bi US\$)
- \rightarrow All sources will be needed: public, international but mainly private sector investments

Climate finance – selected figures



Climate investments by Morocco are estimated at 11,7 bi dollars in the period 2011-2018 = approx. 1,3 bi dollars / year.

Main sectors: energy production, transport, adaptation in the agriculture sector.

Public sector represents 40% of the investment.

Private sector only represents 23% of the investment.

These investments are nowhere near enough to finance the Moroccan NDC !

Climate finance – selected figures



FIGURE 5: FLUX FINANCIERS CLIMATIQUE REÇUS PAR LES PAYS DE LA REGION MENA SUR **LES ANNEES 2010-2020**

(Source : Climate finance needs and flows in the Arab region, UN ESCWA policy brief, 2022: www.unescwa.org/publications/climate-finance-needs-flows-arab-region)

Morocco and Egypt have been the most successful in mobilizing climate finance in the Arab region

60% of the financial flows from public climate finance : 21,6 bi dollars in the period 2010-2020.

Bilateral and multilateral climate finance flows to the Arab region based on reporting to OECD.

How to bridge the gap ?

- Improve climate governance and climate policy implementation.
- Align climate action (NDCs and LEDS) with public budget.
- Attract private investments through green finance.
- Introduce carbon pricing and promote other fiscal instruments.
- Use international finance to leverage other sources and raise ambition

WB/AFD and EU/GIZ have a coordinated offer - Whole of partner for a whole of government approach

Technical and financial contributions to strengthen

- Cooperation between Ministry of Finance and Ministry of Energy Transition to drive climate action

- Climate budget tagging and NDC alignment to public budgeting
- Socially just carbon pricing
- Green financial taxonomy / Green bonds
- Green public procurement





Article 6 & NDC

Preliminary Framework defines all key aspects of a Article6 strategy – next steps:

- → strengthen buy-in from private sector and other stakeholders discuss contribution to **transformational change**
- →create awareness for the risk management (overselling)
- →official validation, approval and establish legal instrument for the framework
- →Implement institutional and operational requirements
- \rightarrow Support pipeline development
- →Constantly reevaluate the whole strategy aligning with LT LES; baselines etc.

Defining project eligibility criteria for Morocco - different approaches



Kingdom of Morocco's Article 6 Framework for International Carbon Market Engagement

> Article 6.2 and 6.4 Framework

Negative List

- Use of nuclear energy.
- Use of fossil fuels for energy production or the extraction of fossil energy sources.
- Hydropower with an installed power of over 20MW.
- Activities in the waste sector without the recovery of material and/or energy.
- Biological sequestration of CO₂.
- Reduction of deforestation or forest degradation.
- Activities that conflict with environmental and human rights conventions ratified
- by the buying country.



Project by project basis

Can be determined by the Moroccan government through the assessment of individual projects that meet eligibility criteria and that do not fall under the country's negative list

(up to Morocco to decide if other projects not in the positive list may be assessed or not)

Thank you for your attention

Anselm Duchrow, Head of Water, Environment & Climate Cluster **GIZ Morocco**



Article 6 Readiness: From Article 6 Roadmap to the Implementation of Article 6 Activities Focused on Project/Programme-based Mitigation Activities (Sectoral Approach)

- Anas Felhi, Regional Manager North & West Africa, KliK Foundation
- Pedro Venzon, International Policy Advisor, International **Emission Trading Association**
- Moderator: Axel Michaelowa, Research Director, **Perspectives Climate Research**

COP78

DE LA TRANSITION ENERGETIQUE DEVELOPPEMENT DURABLE





Gold Standard[®]

ÈRE DE LA TRANSITION ENERGETIQUE E DEVELOPPEMENT DURABLE



Gold Standard



- Fenella Aouane, Head of Carbon Pricing, Global Green Growth Institute (GGGI)
- **Sigrid E. Valberg**, Senior Advisor, NMCE, Government of Norway
- Hugh Salway, Senior Director, Market Development and Partnerships, Gold Standard Foundation Moderator: Axel Michaelowa, Research Director,
- **Perspectives Climate Research**

ww.perspectives.cc

info@perspectives.cc



المملكة المغربية toXHA t I MEYO E Royaume du Maroc



MINISTÈRE DE LA TRANSITION ENERGETIQUE ET DU DEVELOPPEMENT DURABLE - DÉPARTEMENT DU DEVELOPPEMENT DURABLE -



وزارة الانتقال الطاقي والتنمية المستدامة - قطاع التنمية المستدامة -

+.C.U.O+ | SCS++2 | +#E.Q+ A +XC2 +.0SH.+

- XXO | +XEX +008H0|+ -



Q&A Session



المملكة المغربية toXHA t I MEYO E Royaume du Maroc



MINISTÈRE DE LA TRANSITION ENERGETIQUE ET DU DEVELOPPEMENT DURABLE - DÉPARTEMENT DU DEVELOPPEMENT DURABLE -



وزارة الانتقـــال الطـــاقـــي والتنميــــة المستدامــــة -قطـــاع التنميـــة المستدامـــة -

+.C.U.O+ 1 %C8++ 1 +#E.Q+ A +XC +.084.+

- XXO | +XEX +008H0+ -



Thank you!

