

# Journey of Carbon Markets - Voluntary and Compliance



**RCC MENA and South Asia**

*Collaboration for Climate Action*

**K. Umamaheswaran**

**Understanding Carbon Markets & Potential for Pakistan**

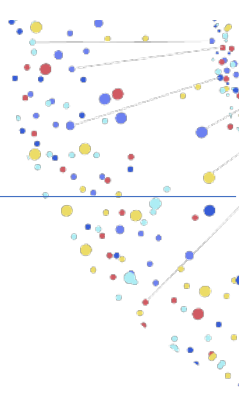
18 Sep | NDRMF Webinar

<https://unfccc.int/RCCMENAandSA>



**United Nations** Climate Change  
Regional Collaboration Centres

# Global Emissions in 2019



Country	CO <sub>2</sub> Emissions/year (Billion Tons)/ Gross	Share of global CO <sub>2</sub> emissions	Emission of CO <sub>2</sub> per Capita (Tons/Person)
<u>China</u>	14	26%	9.7
<u>United States</u>	6.6	13%	20.0
<u>EU-28</u>	4.3	9%	8.6
<u>Pakistan</u>	0.45	>1%	2.4
<u>Russia</u>	2.5	5%	17.4
<u>Japan</u>	1.4	3%	10.7
<u>Germany</u>	0.8	2%	10.1
World	57.4 (Gross) 48.5 (Net)		

Source: <https://data.worldbank.org/indicator/EN.ATM.GHGT.KT.CE>; Pakistan updated NDC 2021;



# Carbon Markets

Carbon credit is considered as **tradable commodity** and technically corresponds to 1 tonne of CO<sub>2</sub>e reduction / avoidance.

- **Domestic Carbon Market** - where the transactions (buying and selling) happen inside the country, between two Pakistan companies (**Carbon Pricing - ETS**)
- **International Carbon Market** - where the transactions happen between Pakistan (seller will be a Pakistan company) and other country (buyer will be a company **out** of Pakistan).



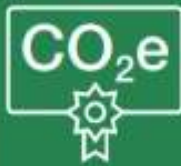
# Compliance vs Voluntary Market



Emissions reducing instruments

Allowances

Carbon credits



Permits sold / allocated by regulatory bodies (e.g., as part of the EU-ETS) which represent the legal right to emit 1 tonne of CO<sub>2</sub>



Avoidance credits (>80%)<sup>A</sup>

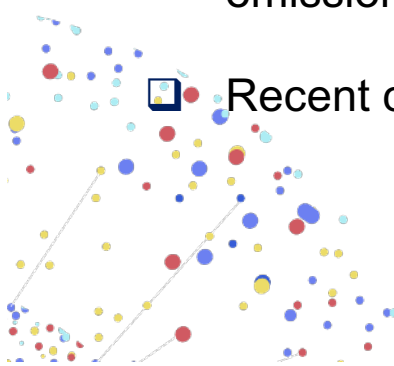


Removal credits (<20%)

# Carbon pricing and domestic emission trading



Out of the 50 largest economies in the world:

- ❑ 41 have some a system already in place or plans to form a price on carbon at the domestic level (Emission Trading, Carbon tax, etc.)
  - ❑ 31 are specifically opting for tradable instruments (carbon market, emission trading scheme, etc.)
  - ❑ >20 have or are making places for putting in place a carbon tax (sometimes in parallel to an emission trading scheme)
  - ❑ Recent carbon pricing plans in: Japan (ETS), India (ETS), Brazil (ETS)
- 

# Carbon Market Mechanisms Regulator....



United Nations Framework  
Convention on Climate Change

CDM – (Ending)

## Compliance Carbon Markets

Mandatory systems regulated by government organizations to cap emissions for specific industries.



Compliance

## Voluntary Carbon Markets

Where carbon credits can be purchased by those that voluntarily want to compensate for their emissions.



Voluntary



Gold Standard

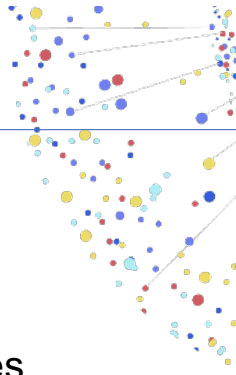
Independent  
standards  
(examples)

**Article 6.2, 6.4;** Under Paris Agreement

Art 6.2 = Govt to Govt Cooperation

Art 6.4 = Companies level cooperation between Pakistan company and Other nation company (2<sup>nd</sup> Generation CDM)

# Understanding Article 6 (6.2, 6.4, 6.8)



**Article 6 of the Paris Agreement** : tool to implement NDC and LT LEDs under voluntary cooperation between parties

## Art 6.2

- International cooperation that involves transfers of mitigation outcomes (ITMOs) from one country to another towards achieving NDC Targets.
- Decision 2/CMA.3 provides guidance for countries to cooperate in achieving their NDCs through the transfer of mitigation outcomes.
- Designed up to the participating Parties but requires that ITMOs are not counted twice (double counting), to ensure environmental integrity.

## Art 6.4

- A centralized mechanism under the purview of the UNFCCC which issues units (A6.4ERs)
- Has similarities to the CDM in its design, but has new requirements and characteristics compared to the CDM

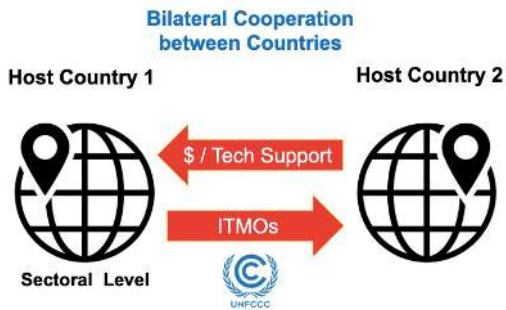
## Art 6.8

- Focuses on other types of cooperation that contribute to reaching mitigation & adaptation goals, but do not involve transfer of Mos (units) among cooperating parties



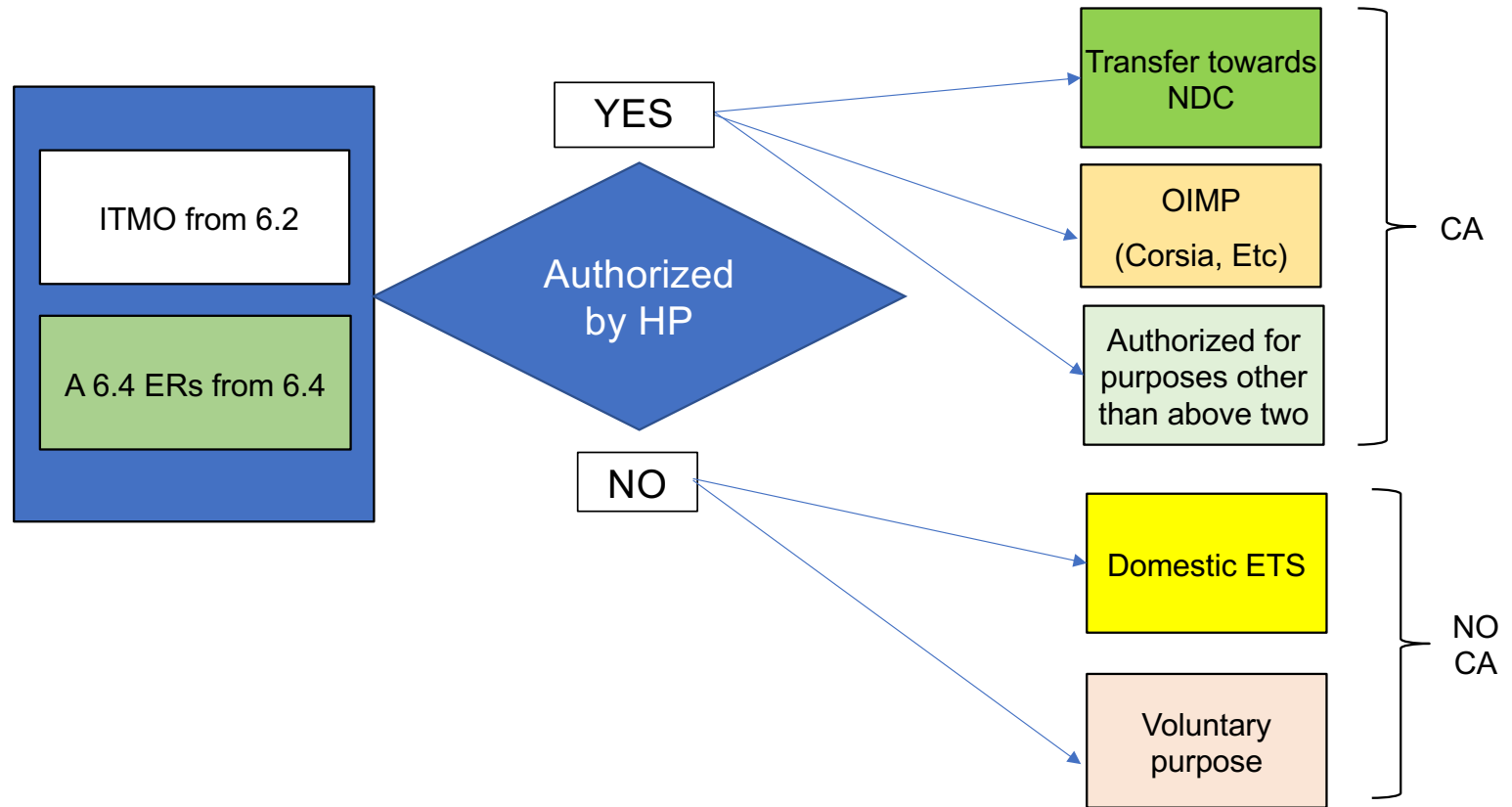
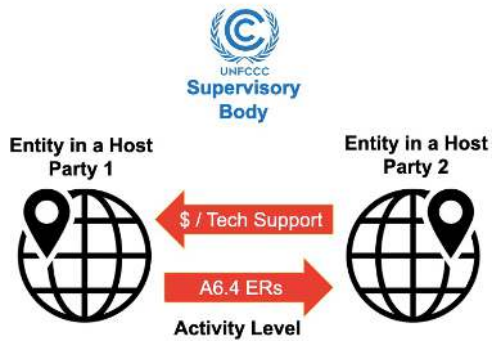
# Understanding Art 6.4 & 6.2?

## Article 6.2



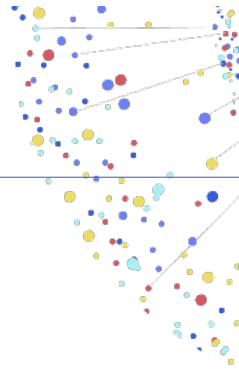
## Mitigation Outcomes

### Article 6.4

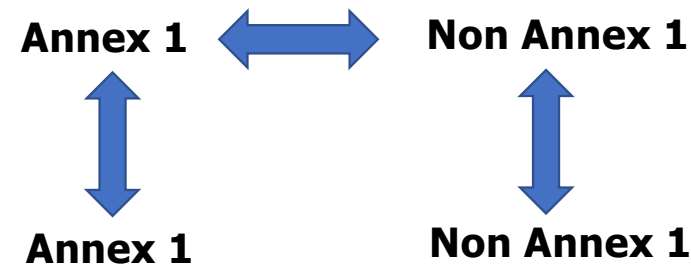




# 'Institutional arrangements' for Article 6.2



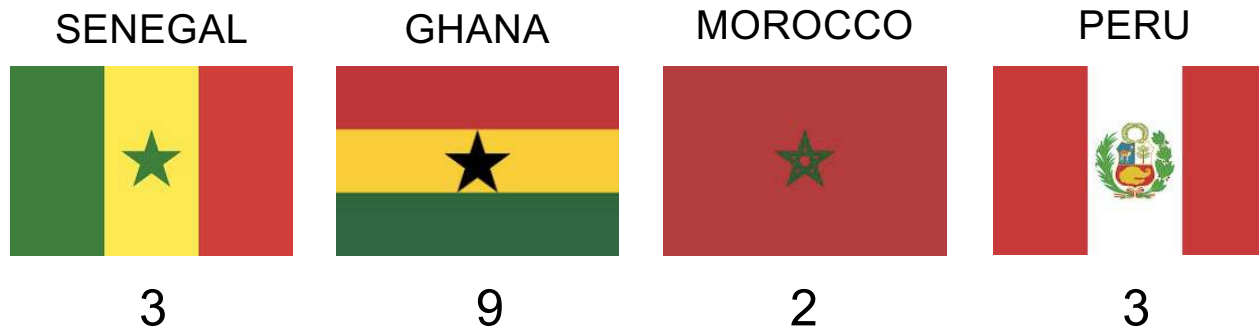
- Bilateral Agreements between two countries



- **Electronic Registry** in place to manage ITMOs
- Arrangements in place for ITMOs, towards achievement of NDCs
  1. **Authorize** : Governance Body (*Institution, Official Or Position, to issue ITMOs*)
  2. **Track** : Electronic medium / Registry to track the ITMOs, ensuring the Art 13 of the PA
  3. **Report** : Initial Report to Annual Report to Biennial Report
- Governed under NDC commitments and transparency ensured through CARP (Centralized accounting and reporting platform)



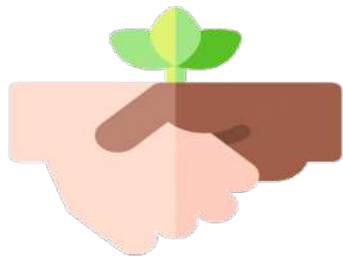
## Article 6. 2 Pilots



1. Art 6 Pilots – 23 Numbers. Globally
2. Countries active in developing pilots
3. **India, Morocco**; Mandated the type of projects that may take part in international carbon market under Article 6.2 mechanisms

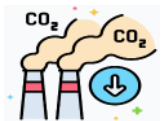
# What is the Article 6.4 mechanism?

The new centralized UNFCCC baseline-and-credits mechanism (replacing CDM/JI)



“A mechanism to contribute to the **mitigation of greenhouse gas emissions** and **support sustainable development** is hereby established under the authority and guidance of the CMA for use by Parties on a voluntary basis”  
“It shall be **supervised by a body** designated by the CMA...”

The mechanism shall aim to:



Promote the **mitigation** of GHG emissions while fostering **sustainable development**



Contribute to the **reduction of emission levels in the host Party**, which will benefit from mitigation activities resulting in **emission reductions that can also be used by another Party to fulfil its NDC**

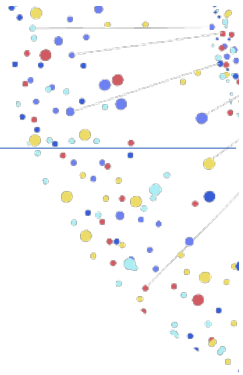


Incentivize and facilitate **participation in the mitigation of GHG by public and private entities** authorized by a Party



To deliver an **overall mitigation in global emissions**

# Institutional Arrangements



1. **Art 6.4 DNA** mandatory by Host Party to participate
2. Establishment of Art 6.4 DNA Decision 3/CMP.3
3. As of Aug 2023, 52 countries have submitted a designated national authority for Article 6.4 mechanism

**The prioritization of preferred Art 6.4 activities may conclude on a defined strategy that ensures activities go beyond NDC targets and may respond to:**

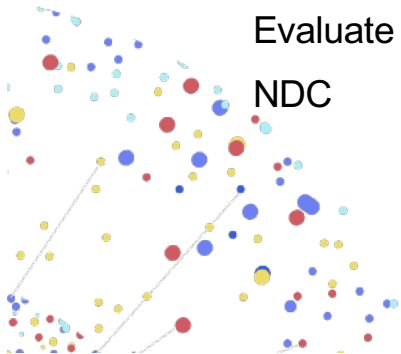
Which sectors will be targeted?

Which types of activities are preferable in these sectors?

Evaluate the potential of quantification of the Mitigation measures => engage in easy measurable activities

Evaluate the cost/effort to distribute Mitigation Outcomes use : High cost/effort => ITMOs / low cost/effort =>

NDC



# Article 6.4 PRINCIPLES

Registered activities, can be hosted by ANY Party and the range of activities is broader, issued Article 6.4 emission reductions (A6.4ERs), come in two types:

- **Authorized emission reductions** (AERs):

- A6.4ERs that have received an authorization in accordance with paragraph 42 of the Rules, modalities and procedures of the mechanism
- These **are ITMOs** and will require **corresponding adjustment**

Authorized

- **Mitigation contribution units** (MCUs):

- These **are NOT ITMOs** the mitigation achieved in the host Party to achieve its NDC or development goals
- Can be used for, **inter alia**, **results-based actions**, **innovative finance**, **domestic carbon pricing schemes**, or domestic price-based measures, for the purpose of contributing to the reduction of emission levels in the host Party

Non-Authorized

# Relationship between Article 6.4 & CDM – Key differences

## Article 6.4 Mechanism

**All Parties** must have **NDCs** (emission reduction targets)

**Larger role for developing countries**  
(*e.g., approve project CPs, provision of info to SB on how its participation contributes to SD*)

**All Parties** can participate as **sellers or buyers** of Mitigation Outcomes)

Parties are expected to **report** to the UNFCCC ex-post on how mitigation actions contribute to the NDCs of host and partner countries

## CDM

**Only (some) Annex I Countries** have legally binding emission reduction targets

**Limited role for developing countries**  
(*i.e. role and commitments of the HC limited to granting of Letters of Approval*)

**Developing countries** participated in the international carbon market as **hosts** for CDM projects (no targets).

The approval of CDM activities implied confirming that participation was voluntary and contributed to SD in the country.

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**SB – Supervisory Body** (CDM – CDM Executive Board)

**AP - Activity Participants** (CDM – Project Participants)

**HP – Host Party** (CDM – Host Country)

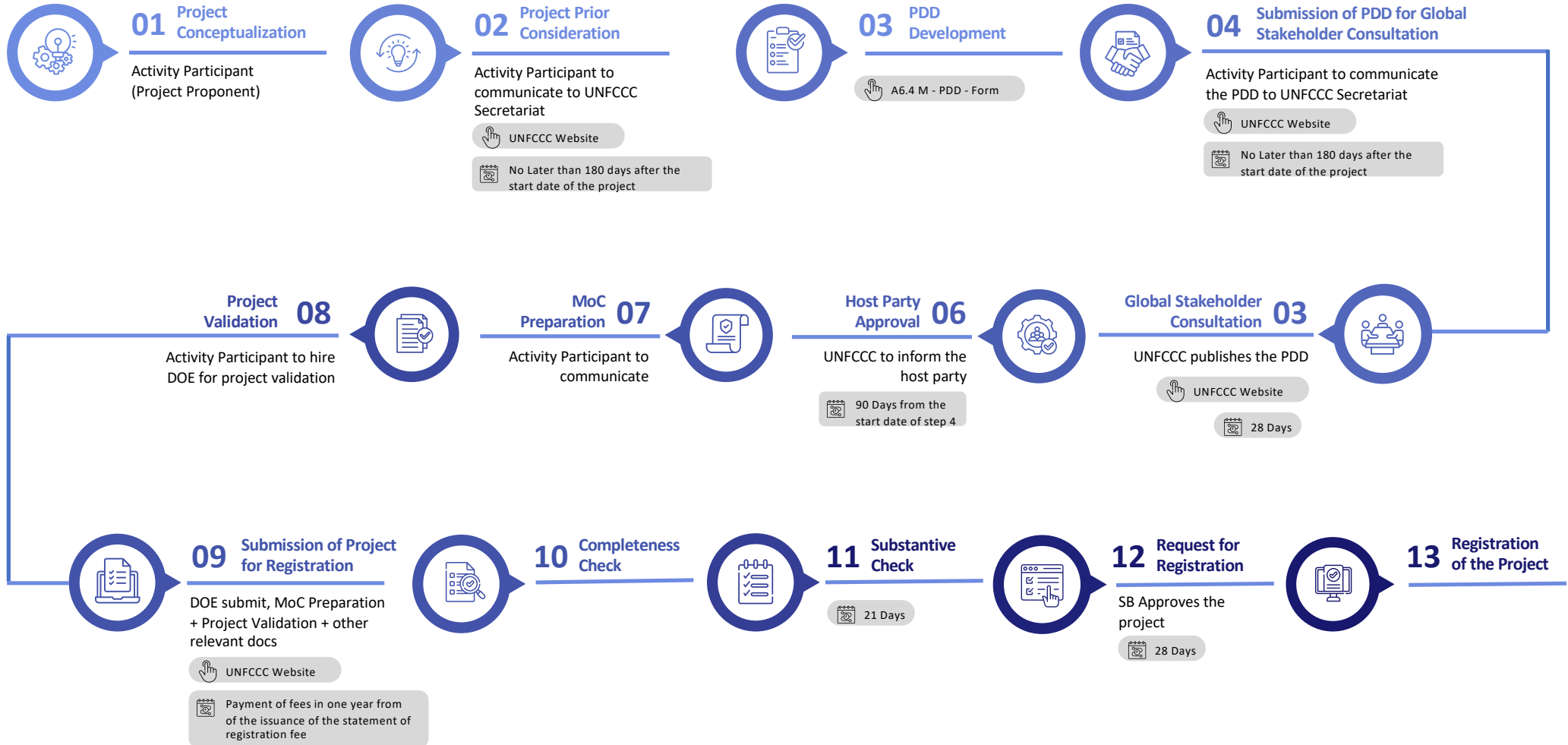
**A6.4ERs** (CER – Certified Emission Reductions)

**Mitigation Contribution Units (MCUs)**

# CDM and Article 6.4 mechanism: Key differences

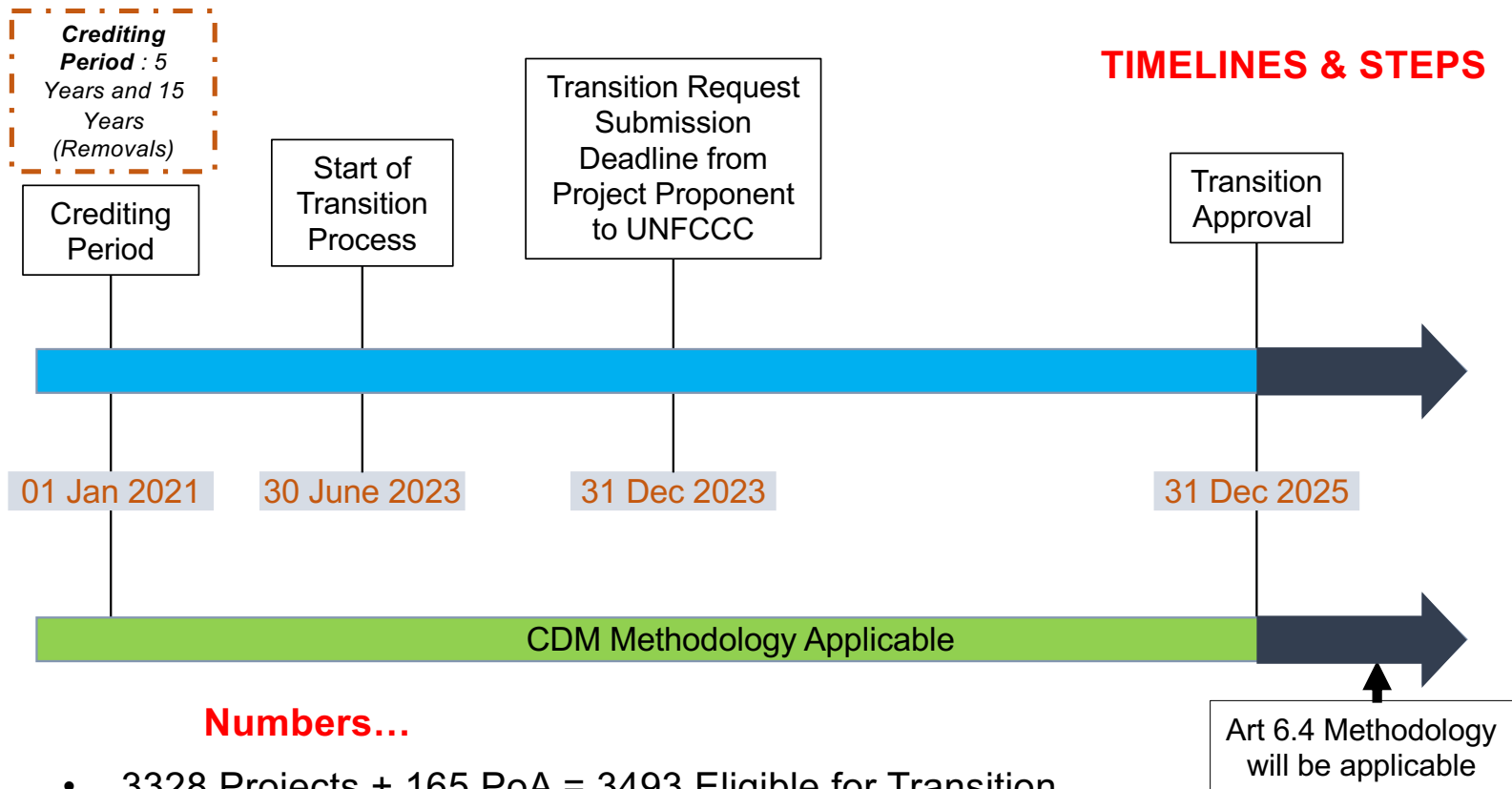
	Article 6.4 mechanism	CDM
Baseline	Host Parties can specify methodological approaches (that are more stringent than what is approved by the SB)	No possibility for Host Parties to specify methodological approaches that are limited to their jurisdiction (except through standardized baselines)
	<ul style="list-style-type: none"> <li>- Encourage ambition over time</li> <li>- Below BAU                             <ul style="list-style-type: none"> <li>o BAT</li> <li>o Ambitious baseline</li> <li>o Actual or historical emissions adjusted downwards</li> </ul> </li> <li>- Align with the LT goal of the PA</li> <li>- Align with HP NDC and when applicable LT-LEDS</li> </ul>	Can be set at BAU (including historical emissions if applicable)
Additionality	To be elaborated	
Crediting period	Maximum 10 years fixed or 3 x 5 years maximum Can be specified by host Party	10 years fixed or 3x7 years
Activity types	Projects, Programmes, (others?)	Projects and Programmes
Infrastructure	A6.4 registry	CDM registry
Public input	Possible at any time of the project	Only during foreseen time for public consultation
Grievance mechanism	Foreseen	None
Stakeholder Consultation	Lifetime of the project crediting period	Before the Validation process
Role of DNA	Approves activities Authorizes participants Must specify activity type the Host Party is willing to approve	
Units produced	Authorized A6.4ER or	Mitigation Contribution Units (MCUs)
Corresponding adjustments	Yes (except for MCUs)	No
Addressing reversals	To be developed	

# Art 6.4 Project Cycle.





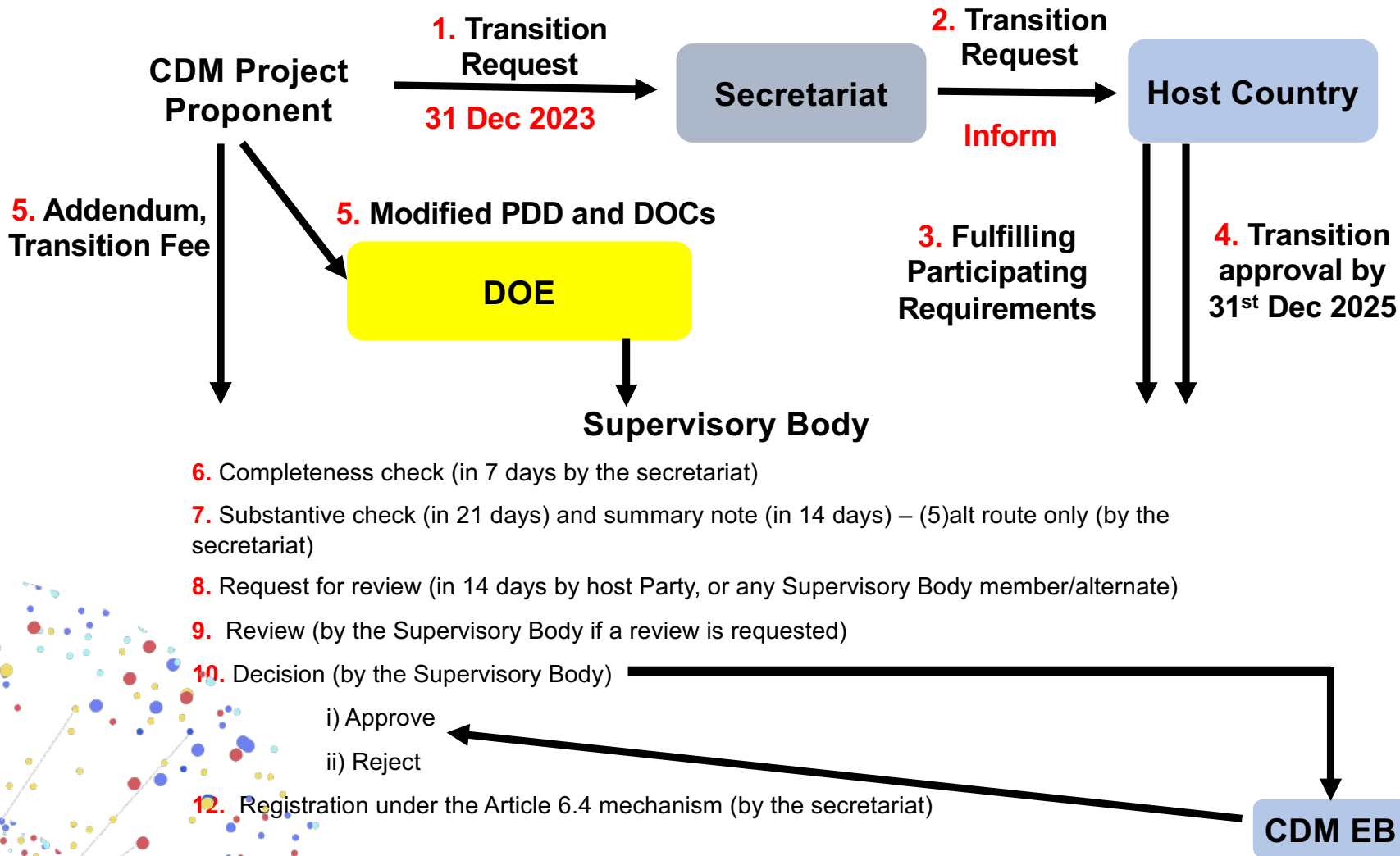
# CDM Transition



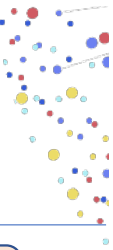
## Numbers...

- 3328 Projects + 165 PoA = 3493 Eligible for Transition (crediting period 1<sup>st</sup> Jan 2021) {31 Projects from Pakistan}
- 2003 Large Scale + 1490 Small Scale
- As on date 100+ projects requested for transition

# Transition of CDM Activities to the Art 6.4 Mechanism



# About RCC MENA and SA – Accelerating Implementation



## Achieving Effective Engagement

- 1 **AMBITION:** Maximize the magnitude and extent of commitment to climate action
- 2 **IMPLEMENTATION:** Facilitate implementation of climate action to achieve commitments
- 3 **PARTNERSHIPS:** RCC oversight and regional climate action coordination

### Supporting Action



### Geographical Coverage

#### Middle East (12 Countries)

- GCC**
- Bahrain
  - Kuwait
  - Oman
  - Qatar
  - Saudi Arabia
  - UAE
  - Iraq
  - Jordan
  - Palestine
  - Syria
  - Yemen
  - Lebanon

#### North Africa (10 Countries)

- Algeria
- Comoros
- Djibouti
- Egypt
- Libya
- Tunisia
- Mauritania
- Morocco
- Somalia
- Sudan

#### South Asia (8 Countries)

- Afghanistan
- Bangladesh
- Bhutan
- India
- Maldives
- Nepal
- Pakistan
- Sri Lanka

30 Countries





## RCC MENA and South Asia

*Collaboration for Climate Action*

# Thank You

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**United Nations** Climate Change  
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