

Programmatic CDM – How is it different?

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a short story...

- a background from China
 - Danish programme, UNEP and CASS, Programmatic CDM...
 - A case in Henan province, biogas digesters
 - An existing national programme
 - No Chinese policy supporting Programmatic CDM

Outline

- Programmatic CDM – how is it different?
- International rules
- Cases
- Issues to consider in contracts
- Reality check

Programmatic is CDM – how is it different?

check “A primer on CDM Programme of Activities”
on <http://cd4cdm.org/Publications/PrimerCMDPoA.pdf>

The Origin of P-CDM

➤ Criticism about CDM

- ✓ Fails to benefit LDCs and poor communities
- ✓ High transaction costs and complicated rules
- ✓ Leaves energy efficiency among households, service sector, renewable for end users, transportation, much untouched

➤ Suggestions to Reform CDM

- ✓ Sectoral CDM
- ✓ Policy-based CDM
- ✓ Programmatic CDM

The Concept of P-CDM

Definition of a Programme of Activity - PoA

A programme of activities (PoA) is a voluntary coordinated action by a private or public entity which coordinates and implements any policy/measure or stated goal (i.e. incentive schemes and voluntary programmes), which leads to anthropogenic GHG emission reductions or net anthropogenic greenhouse gas removals by sinks that are additional to any that would occur in the absence of the PoA, via an unlimited number of CPAs.

Definition of a CDM Programme Activity - CPA

A CPA is a project activity under a programme of activities. A CPA is a single, or a set of interrelated measure(s), to reduce GHG emissions or result in net anthropogenic greenhouse gas removals by sinks, applied within a designated area defined in the baseline methodology.

Normal CDM versus PoAs

Normal CDM

CER Buyer

CDM project (owner)

EB reg.

Programmatic CDM

CER Buyer(s)

PoA (coordinator)

CPA1

CPA2

CPA3



Policies versus Programmes

The Executive Board has clarified that in general:

- A baseline scenario shall be established taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector (EB 22, Annex 3, paragraph 4).

However, only *mandatory* laws and regulations need to be taken into account, so national and local policies that do not have legally binding status can be ignored:

- The alternative(s) shall be in compliance with all mandatory applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g. to mitigate local air pollution (EB 29, Annex 5).

Policies versus Programmes ⁽²⁾

In addition, the Executive Board has created exceptions for the following types of mandatory national and/or sectoral policies:

1. National and/or sectoral policies or regulations that give comparative advantages to more emissions-intensive technologies or fuels over less emissions-intensive technologies or fuels [so-called Type E+ policies].

Only national and/or sectoral policies or regulations under paragraph 6 (a) that have been implemented before adoption of the Kyoto Protocol by the COP (decision 1/CP.3, 11 December 1997) shall be taken into account when developing a baseline scenario. If such national and/or sectoral policies were implemented since the adoption of the Kyoto Protocol, the baseline scenario should refer to a hypothetical situation without the national and/or sectoral policies or regulations being in place. (EB 22, Annex 3, paragraph 7(a)).

Policies versus Programmes ⁽³⁾

The Executive Board has created exceptions for the following types of mandatory national and/or sectoral policies:

2. National and/or sectoral policies or regulations that give comparative advantages to less emissions-intensive technologies over more emissions-intensive technologies (e.g. public subsidies to promote the diffusion of renewable energy or to finance energy efficiency programs) [so-called Type E- policies] (EB 22, Annex 3, paragraph 6).

National and/or sectoral policies or regulations under paragraph 6 (b) that have been implemented since the adoption by the COP of the CDM M&P (decision 17/CP.7, 11 November 2001) need not be taken into account in developing a baseline scenario (i.e. the baseline scenario could refer to a hypothetical situation without the national and/or sectoral policies or regulations being in place) (EB 22, Annex 3, paragraph 7(b)).

The objective of e+/e-

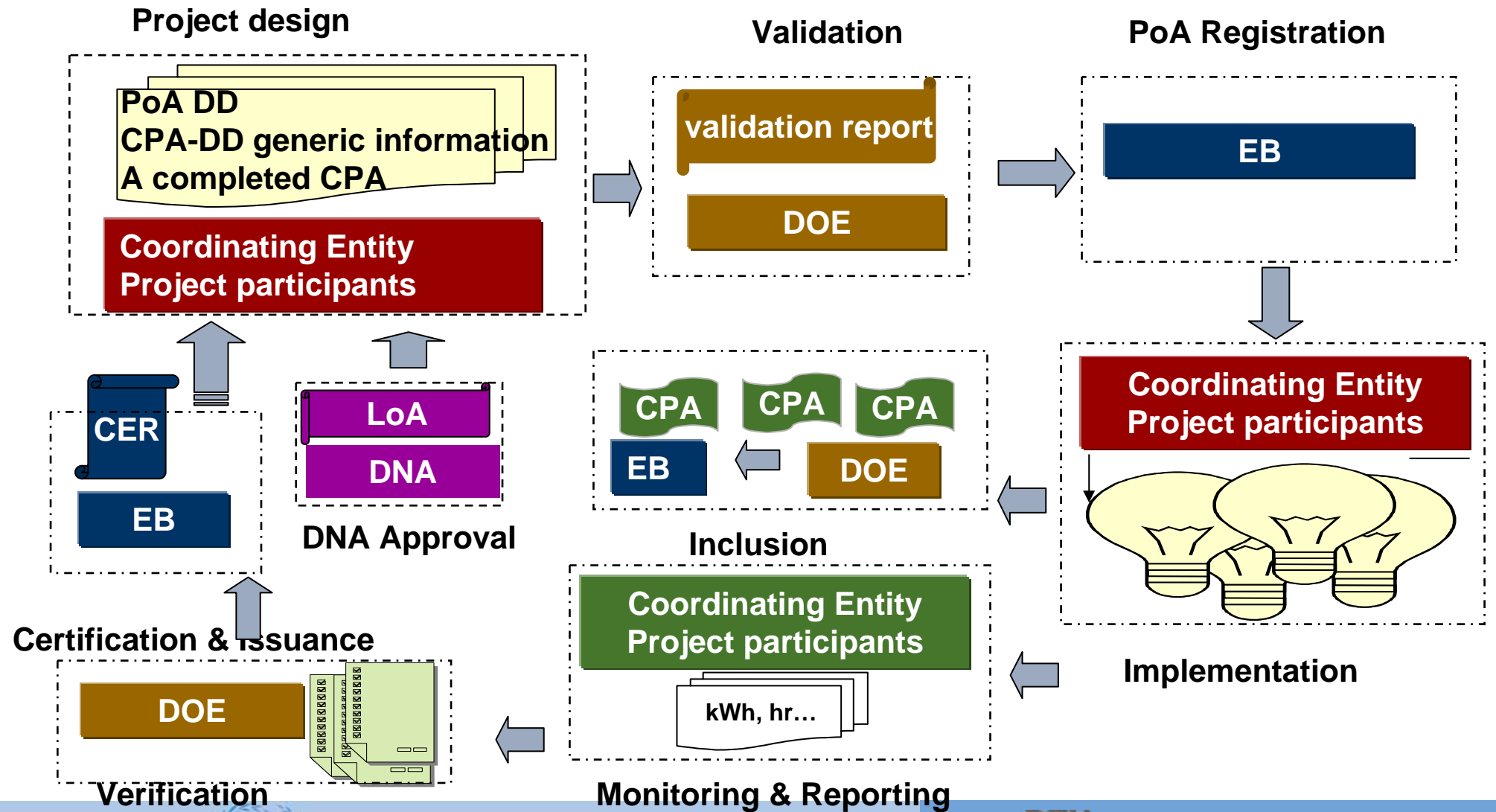
- As a general principle, national and/or sectoral policies and circumstances are to be taken into account on the establishment of a baseline scenario, without creating perverse incentives that may impact host Parties' contributions to the ultimate objective of the Convention (EB 22, Annex 3, paragraph 5).

Finally, where analysis shows that there is widespread non-compliance in a country or region with mandatory laws and policies, then a scenario involving non-compliance may be a valid baseline.

- In the case of one approved baseline methodology, AM0012, the Executive Board found that while monitored compliance with a particular national policy was less than 50%, it could not be said that the policy was enforced. Once monitored compliance exceeded 50%, however, the assumption that the policy is not enforced would no longer be tenable. The baseline scenario in that case was identified as a gradual improvement of compliance with the policy.

International Rules about P-CDM Implementation

P-CDM Project Cycle



The Rules of P-CDM

Latest edition of procedures from EB55:

(http://cdm.unfccc.int/Reference/Procedures/PoA_proc01.pdf)

“Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities“

along with

“Procedures for review of erroneous inclusion of a CPA“

and

“Procedures for approval of the application of multiple methodologies to a programme of activities“

provide the framework by which programmes of activities will be assessed.



Existing Rules about P-CDM (1)

EB 55 Report, Annex 38 Guidance on the registration of project activities under a PoA as a single CDM project activity (Ver.4.01)

- **The physical boundary:** the municipality, region within a country, country or several countries within which all CPAs included in the PoA will be implemented
- **Host Country Policies and Regulations:** PoAs addressing mandatory policies and regulations are permissible, conditions: either (1) demonstrate that poor enforcement and widespread non-compliance or (2) if enforced, the PoA could increase the enforcement beyond the mandatory level
- **Coordinating or Managing Entity (C/ME):** (1) A PoA shall be proposed by the C/ME; (2) the C/ME be (i) a PP authorized by all participating host country DNAs involved (ii) identified to communicate with the EB
- **Project participants** of the PoA shall make arrangements with the C/ME about communications, CER distribution and change of PPs. PPs be registered in relation to the PoA. A PP may or may not be involved in one of the CPAs related to the PoA

Existing Int'l Rules about P-CDM (2)

- **Double Counting:** The CE shall identify measures to ensure to avoid double counting. The measures are to be validated and verified by DOE.
- **More than one Methodology and one type of technology may be allowed provided specific prior approval by the EB:** The DOE shall submit a request for approval to the secretariat together with the latest version of the CDM-POA-DD and CDM-CPA-DD. The secretariat shall evaluate the request for approval
- **Additionality:** The PoA shall demonstrate that **net GHG emission reductions or removals for each CPA are real and measurable**, accurate, and are *uniquely attributable* to the PoA.
- **Requirements for CPA:** Each CPA shall be uniquely identified, defined and localized in an unambiguous manner including the exact start and end date of the crediting period and meet requirements set in PoA

Existing Int'l Rules about P-CDM (3)

- **Duration of the PoA, (1) max. 28 years** for regular projects and **max. 60 years** for A/R project activities, shall be fixed at the time of request for PoA registration. **Any CPA can be added to the PoA at any time during the duration of the PoA** by the C/ME. The crediting period of a CPA will be either a max. of 7 years (21 for A/R) with at most 2 renewal or a max. of 10 years (30 for A/R) with no option of renewal, but must end no later than the PoA. **Renewable of Credit Period:** The latest version of the “Procedures for Renewal of a Crediting Period of a Registered CDM project activity” shall be applied, to *a PoA every 7 years* (21 years for A/R). Any resulting changes to the *PoA* shall be applied by each CPA at the time of its first crediting period renewal after such *PoA* change.
- **Methodology Change:**
 - ✓ If the **AM is put on hold or withdrawn**, not for the purpose of inclusion in a consolidation, no new CPAs shall be added to the PoA after some timelines
 - ✓ If the **AM is subsequently revised or replaced** by inclusion in a consolidated methodology, the PoA shall be revised accordingly and changes validated by a DOE and approved by the EB. Each CPA included in the PoA *thereafter* has to use the new PoA.

Existing Int'l Rules about P-CDM (3)

- **Monitoring:** The emission reductions or removals of each *CPA* shall be monitored as per the registered monitoring plan. The verification method or approach shall ensure the accuracy of emission reductions.

- Skip the following on contents of PoAs and CPAs...

Contents to be covered in the POA-DD

- a) Identify the C/ME, Host Party(ies) and PoA participants
- b) Definition of the boundary for the PoA in terms of a geographical area
- c) Description of the policy/measure or stated goal that the PoA seeks to promote
- d) Confirmation that the proposed PoA is a voluntary action by the C/ME.
- e) Demonstration that in the absence of the CDM
 - (i) the proposed voluntary measure would not be implemented, or
 - (ii) the mandatory policy/regulation: ‘systematically not enforced’ + non-compliance widespread in the country/region, or
 - (iii) that the PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation

Contents to be covered in the PoA-DD

- f) Description of a typical CPA that will be included in the PoA
- g) Definition of eligibility criteria for CPA
- h) PoA starting date and duration: Max 28 yr (60 yr for A/R)
- i) Description of the operational and management arrangements
- j) Description of a monitoring plan for a CPA
- k) Description of sampling method/procedure to be used by DOEs for verification
- l) Environmental analysis of the PoA
- m) Stakeholder consultation
- n) If public funding is used, confirm that no ODA is not being diverted to the implementation of the PoA

Contents of the template CPA-DD

- a) Geographic reference or other means of identification, Name/contact details of the entity/individual responsible for CPA
- b) the Host Party
- c) Starting date, type and duration of the crediting period of the CPA
- d) Information showing each CPA meets requirements about: (i). Eligibility criteria; ii. The demonstration of additionality; iii. Calculations of baseline emissions and estimated emission reductions
- e) Environmental analysis
- f) Local stakeholder consultation
- g) Confirmation that the CPA is neither registered as a CDM project activity nor included in another registered PoA

Inclusion of a CPA under a registered PoA (1)

Submit more CPAs

- CPA can be included in a registered PoA at any time during the duration of the PoA. C/ME shall forward the completed CPA-DD form to the same DOE that requested the PoA registration for consistency checking. More than one CPA-DD could be submitted at one time.
- DOE shall check the CPA-DD against the PoA and if no problem, include the proposed CPA(s) in the registered PoA by uploading the CPA-DD to EB via a dedicated interface on the UNFCCC CDM website. Such uploads shall be grouped and at most once per month.
- CPA-DD(s) uploaded by the DOE will be automatically included in the registered PoA and displayed on the view page of that PoA. The DOE, the C/ME and the DNA are automatically notified of the change in the status of the PoA.

DNA or EB member find errors in the CPA included

- If a DNA of the PoA or a EB member finds any error that disqualifies a CPA from inclusion in the PoA, the EB Secretary shall be notified.
- EB shall decide whether to exclude the CPA from the PoA with immediate effect. The C/ME, the DOE and the DNAs involved shall be informed



Determine Debundling under P-CDM

- Criteria of de-bundling under PCDM: a proposed small-scale CPA of a PoA shall be deemed to be a de-bundled component of a large scale activity if there is already an activity, which:
 - ✓ Has the same activity implementer as the proposed small scale CPA or has a coordinating or managing entity, which also manages a large scale PoA of the same sectoral scope, and;
 - ✓ The boundary is within 1 km of the boundary of the proposed small-scale CPA, at the closest point.
- Only those PoAs need to be considered in determining de-bundling that are: (i) in the same geographical area; and (ii) use the same methodology; as the POA to which proposed CPA is being added
- Which may be a (i) registered small-scale CPA of a PoA, (ii) an application to register another small-scale CPA of a PoA or (iii) another registered CDM project activity

Cases

(check cdmpipeline.org or cdm.unfccc.int)

Example 1 Uganda Municipal Waste Compost Programme (p1)

PoA 2956

- The common practice in Uganda is to dispose wastes in landfills located adjacent to wetlands. The wetlands get contaminated by leachate and significant amounts of methane is emitted to the atmosphere. It is proposed to recover the organic matter from municipal solid waste as compost and avoid methane emission through a “Municipal Waste Compost Programme” with the support of CDM. As multiple towns and cities are expected to participate in this programme, a Programme of Activity CDM is being proposed.
- The National Environment Management Authority (*NEMA*) is the nodal agency which would support the municipalities in setting up of *composting facilities*, providing of the technical know how and monitoring the implementation and operation of the individual compost plants. Municipal waste composting is a new concept in Uganda and *the World Bank is supporting the transfer of appropriate technology through NEMA.*
- The facilities would operate on the revenues generated from sale of compost and from the sale of emission reductions.



Example 1 Uganda Municipal Waste Compost Programme (p2)

- The Composting projects would be implemented by the individual municipalities. Each of these projects is considered a CDM Programme Activity (CPA). *The Municipalities would transfer their CER rights to the NEMA in lieu of the investments received for the CPA.* The NEMA would sell the CERs to the Community Development Carbon Fund (*CDCF*) of *the World Bank*. The co-operation agreement signed between the municipalities and NEMA would have provisions for sharing of financial benefits accruing from the sale of emission reductions. The NEMA would be the Coordinating/Managing Entity (C/ME) for all the CPAs under the Programme of Activities (POA).

Example 2 Bachat Lamp Yojana (BLY) scheme (p1)

PoA 2956

- The *Bureau of Energy Efficiency in India will coordinate the Small-Scale Programme of Activities (SSC-PoA)* and will support the project implementer(s) in implementing the CDM Programme Activities (*CPAs in India through collaboration with Electricity Distribution Companies (DISCOMs)*). The scheme after implementation will result in reducing GHG emissions (CO₂) from power plants connected to the grid.
- Under the BLY scheme quality long-life *CFLs would be distributed by SSC-CPA implementer(s) to grid-connected residential households in exchange of an incandescent lamp (ICL) and INR 15*. Once the CFLs have reached their end of life or any CFLs which have failed prematurely during the project period, the SSC-CPA implementer(s) would arrange for the collection and disposal of CFLs.
- To bridge the cost differential between the market price of the CFLs and the price at which they are distributed to households, the CDM is harnessed. *The SSC-CPA implementer(s) would cover the project cost through sale of GHG emission reductions achieved in their respective CPA areas.*

Example 3 Masca Small Hydro Programme

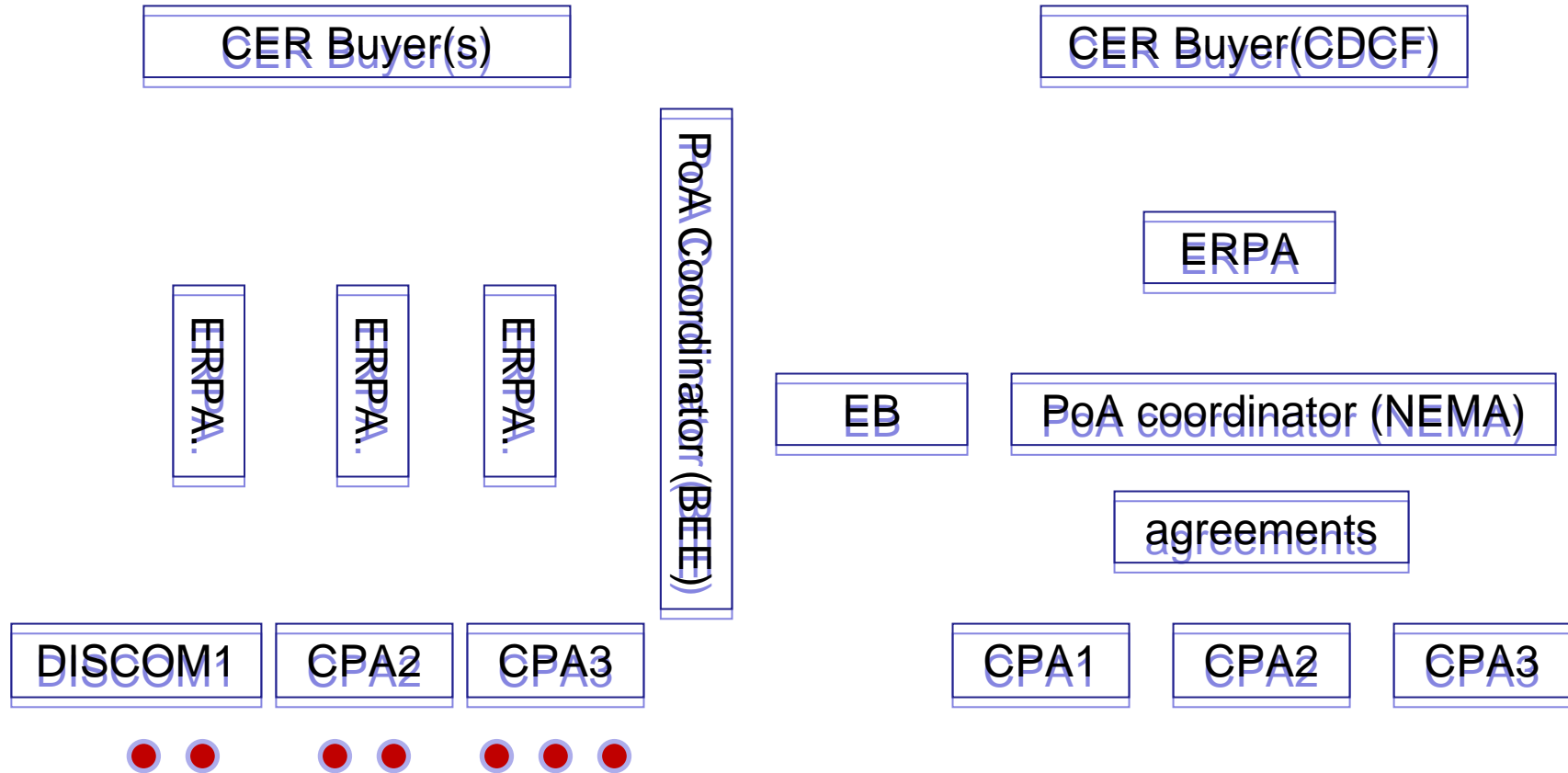
PoA 3562

- A group of Honduran entrepreneurs, who prior to founding the program had been pursuing one or more small hydro projects individually, decided in early 2005 to join forces to overcome hurdles that were common to their projects to the grid. Nevertheless, due to the small size of the individual projects the managing entity Hidromasca S.A. struggled to commit professional assistance. The suitability of programmatic CDM to the initiative was discovered in February 2008. From that moment on the joint initiative formally converted to the Masca Small Hydro Programme, where
 - Hidromasca S.A. would act on behalf of all members to promote the program and its connected projects.
 - The possibility to earn “carbon credits” under the UNFCCC CDM should be investigated and assistance should be contracted by Hidromasca.
 - *The additional revenues obtained through the sales of “carbon credits” should be used to improve the financial viability of the projects and also compensate Hidromasca for work undertaken on behalf of the group.*
 - *CPAs must contractually cede their rights to claim and own emission reductions under the Clean Development Mechanism of the UNFCCC to the managing entity of the present PoA.*

Contract structures recorded

- Example 1: Upfront financing by the *coordinator* in exchange of emission rights
- Example 2: Upfront financing by the *CPA-organizer*, who would need a contract structure with the coordinator to ensure access to the CER revenues
- Example 3: Upfront financing by the *project proponents*, CER revenues to coordinator, distributed to CPAs (project owners)

Programmatic CDM structures



SOME ISSUES TO BE CONSIDERED IN CONTRACTS

Up-front costs may need to be distributed to later CPA participants (unless donor funded, but that is not a permanent solution)

- Costs involved may be considerable:
 - PoA+generic and specific CPA-DDs: 40-60.000 Euro
 - Validation 50-70.000 Euro
 - Verification 20-25.000 Euro = 2-2,500 CERs
 - total 110-155.000 Euro = 11-15,000 CERs
- In addition
 - any Coordinator fees
 - monitoring services
 - methodological changes (and subsequent revision of PoA)
- Keep coordinator responsible for discounting the up-front payment and calculate his own break-even, i.e. how many CPAs he would need to include to cover his costs – assuming he has the rights to the CERs (he is not buying the CERs, but pays seed funds to project assets)

SOME ISSUES TO BE CONSIDERED IN CONTRACTS

How to guard against putting the whole PoA on hold if one CPA is erroneously included?

- Strict supervision of the inclusion applications by the Coordinator - deferring acceptance of a CPA if necessary. Prompt suspension by the Coordinator of CPAs not operating as required. Hand-holding to keep them on track.
- Up-front payment by the Coordinator to the individual installations leaves the consideration with him to decide on doubtful inclusions at the risk of loss through rejection. He would have the right to the CERs in return (Uganda and Honduras cases) – but a high risk to the Coordinator

How to keep individual installations in the CPA/PoA?

- The individual installation must be legally bound exclusively and under liability to the initial PoA for the entire crediting period to guard against double counting – and to ensure the coordinator's recuperation of any up-front payments to CPAs

a few suggestions...

If no up-front CER-payment by the CER-buyer, consider registering unilaterally, i.e. forget the ERPA in the beginning!

Ideally, the coordinator is an entity with an economic interest in promoting the PoA and a market against which he can determine his cost/benefit. – Or the CPA managers are

- if a technology provider, he would have an interest in selling his equipment and thus must be willing to carry the risks affiliated
- If a public sector administrative entity or an association with no legal title to the CERs, a contract structure that allows CERs to be kept in the Coordinators account must be established

Keep Coordinator responsible for up-front payment to individual CPA-participants - or keep CPA-holders responsible for up-front payments to individuals (India case), but in such cases the coordinator is distanced from the deals

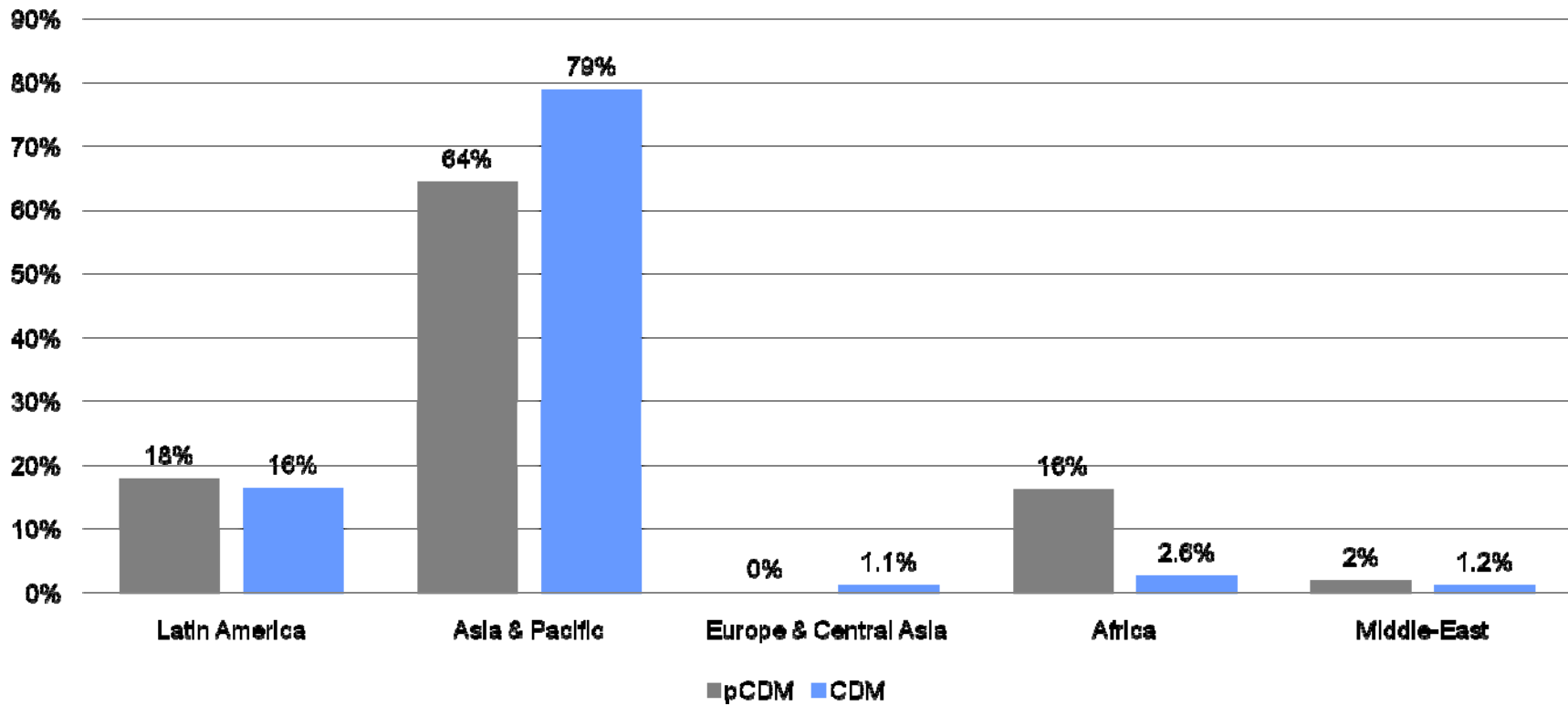
- Up-front payments equally supports a financial additionality argument

the Chinese case revisited...

- national promotion already effective (30% grant)
- additionality argument linked to financing
- Public sector coordinator - no distribution of CER revenues
- Make sure practical arrangements match additionality arguments
- PoAs never meant to particularly benefit China...

Market responsiveness

% comparison of regional distribution of pCDM and CDM



Reality check

- Meant to benefit LDCs by providing access to CDM for micro scale activities
- Institutional strength and permanence of Coordinators would be a challenge even in overly institutionalized countries like Denmark
- CDM cost recovery difficult for commercial operators, so unless donor funding is involved, PoAs will benefit larger installations
 - 1 biogas digester = 1-2 tCO₂/year (3-500 US\$ per installation)
 - 100 kW micro hydro installation = 300-500 tCO₂/year (3000 US\$/kW)

Reality check

- Larger installations can rarely benefit from simple contract structures, due to coordinators' limited financing capacity
- Risks are considerably higher for all involved – coordinators, buyers, and fellow CPAs (musketeer oath)
- Consider not-for-compliance markets – Gold Standard or VCS – as compliance buyers may be less willing to buy the good story and more focused on certainty of delivery

Thank You!

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Comparison of existing rules for traditional CDM and Programme of Activities

Appendix I.		
	Traditional CDM	PoAs
Reasons for Review	DOEs' transfer of CERs can only happen when a DOE's accreditation is suspended or withdrawn and where significant deficiencies are identified in the relevant validation, verification or certification report for which the DOE was responsible. A review shall be limited to issues of fraud, malfeasance or incompetence of the designated operational entities.	DOEs' transfer of CERs can happen when an erroneous inclusion of a CPA is identified during a review, which can be initiated if a DNA of a Party involved in the PoA or a Board member identifies any error .
<i>Reference</i>	<i>Para 22, 65 17/CP.7 Marrakesh accords</i>	<i>Para 2, 11(b) Procedures for review of erroneous inclusion of a CPA</i>
Window for Review Request	The issuance shall be considered final 15 days after the date of receipt of the request for issuance , unless a Party involved in the project activity or at least three members of the executive board request a review of the proposed issuance of CERs.	The error can be identified within one year after the inclusion of CPA into a registered PoA or renewal of the crediting period of the CPA, or six (6) months after the issuance of CERs for that CPA, whichever is the later (i.e., during the whole crediting period).
<i>Reference</i>	<i>Para 65 17/CP.7 Marrakesh accords</i>	<i>Para 2 Procedures for review of erroneous inclusion of a CPA</i>
Penalty	An amount of reduced tonnes of carbon dioxide equivalent equal to the excess CERs issued has to be "given back" by the DOE.	An amount of reduced tonnes of carbon dioxide equivalent to the amount of CERs issued to the PoA as a result of the CPA having been included has to be "given back" by the DOE. The CPA that has been excluded cannot be re-included again in that or any other PoA, or qualify as a CDM project activity.
<i>Reference</i>	<i>Para 65 17/CP.7 Marrakesh accords</i>	<i>Para 11(b) Procedures for review of erroneous inclusion of a CPA</i>