



# CD4CDM Tanzania workshop 1

EPMS, CEEEST, **SouthSouthNorth** and  
UNEP

Dar Es Salaam

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CDM Modalities and Procedures  
CDM Institutions and regulatory bodies  
Project Cycle  
Elements of project appraisal





- A CDM project activity is mostly a part of a larger project
- CDM is available for emissions mitigation projects and certain sequestration projects
- CDM is market based
- CDM is project based
- CDM outputs are Certified Emissions Reductions (CER) = 1 tonne CO<sub>2</sub>equivalent
- CERs give annex 1 countries possibility to emit one tonne of CO<sub>2</sub> = globally neutral





## Modalities and Procedures of the CDM

<http://cdm.unfccc.int/Reference/Documents/cdmmp/English/mpeng.pdf>

- Definitions
- Role of the COP/MOP
- Executive Board
- Accreditation and Designation of Operational Entities
- Designated Operational entities
- Participation requirements
- Validation and registration





- Monitoring
- Verification and certification
- Issuance of CERs
- Appendix A: Standards for accreditation of Operational Entities
- Appendix B: Project design document
- Appendix C: Terms of reference for establishing guidelines on baselines and monitoring methodologies
- Appendix D: Clean development mechanism registry requirements



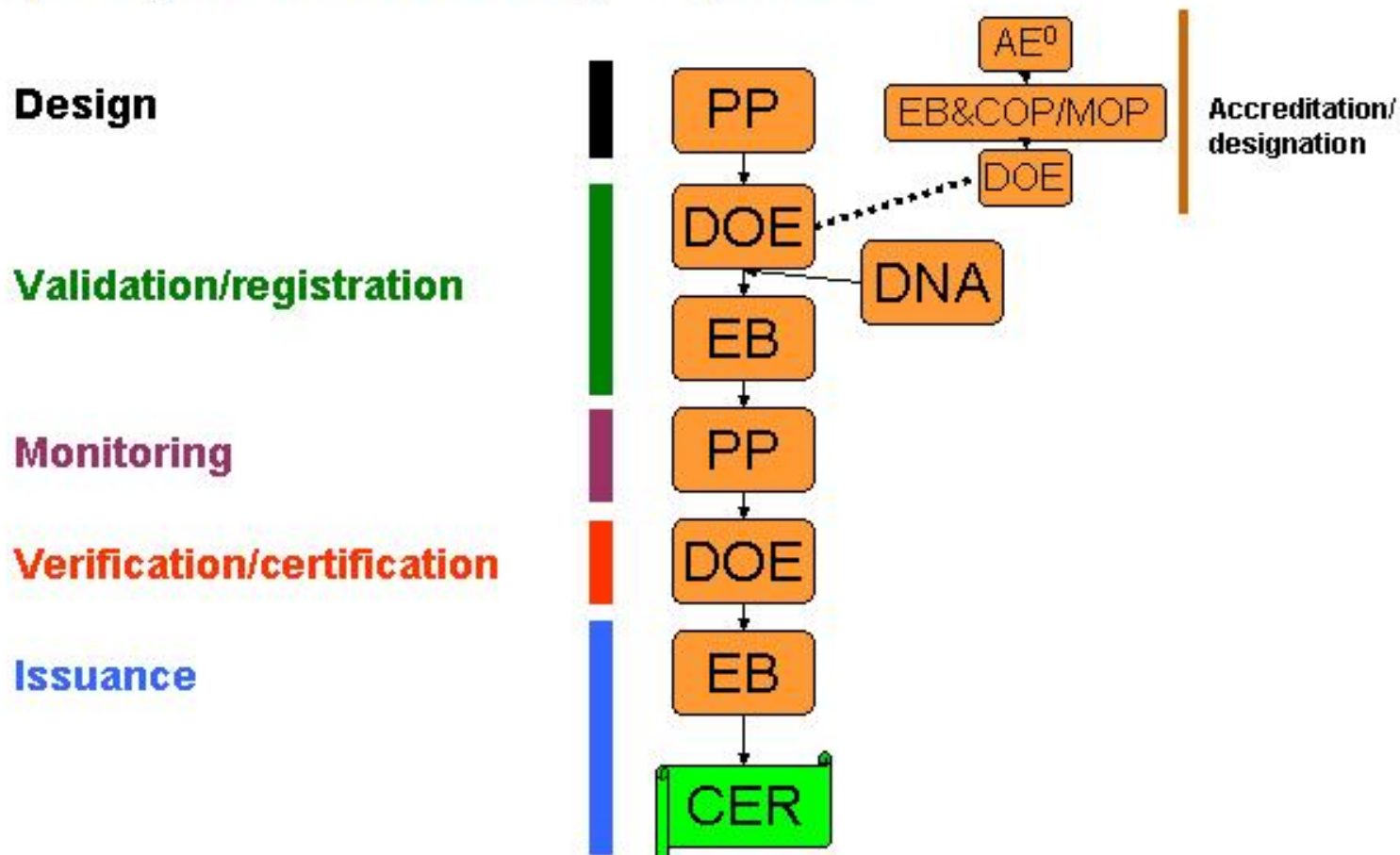


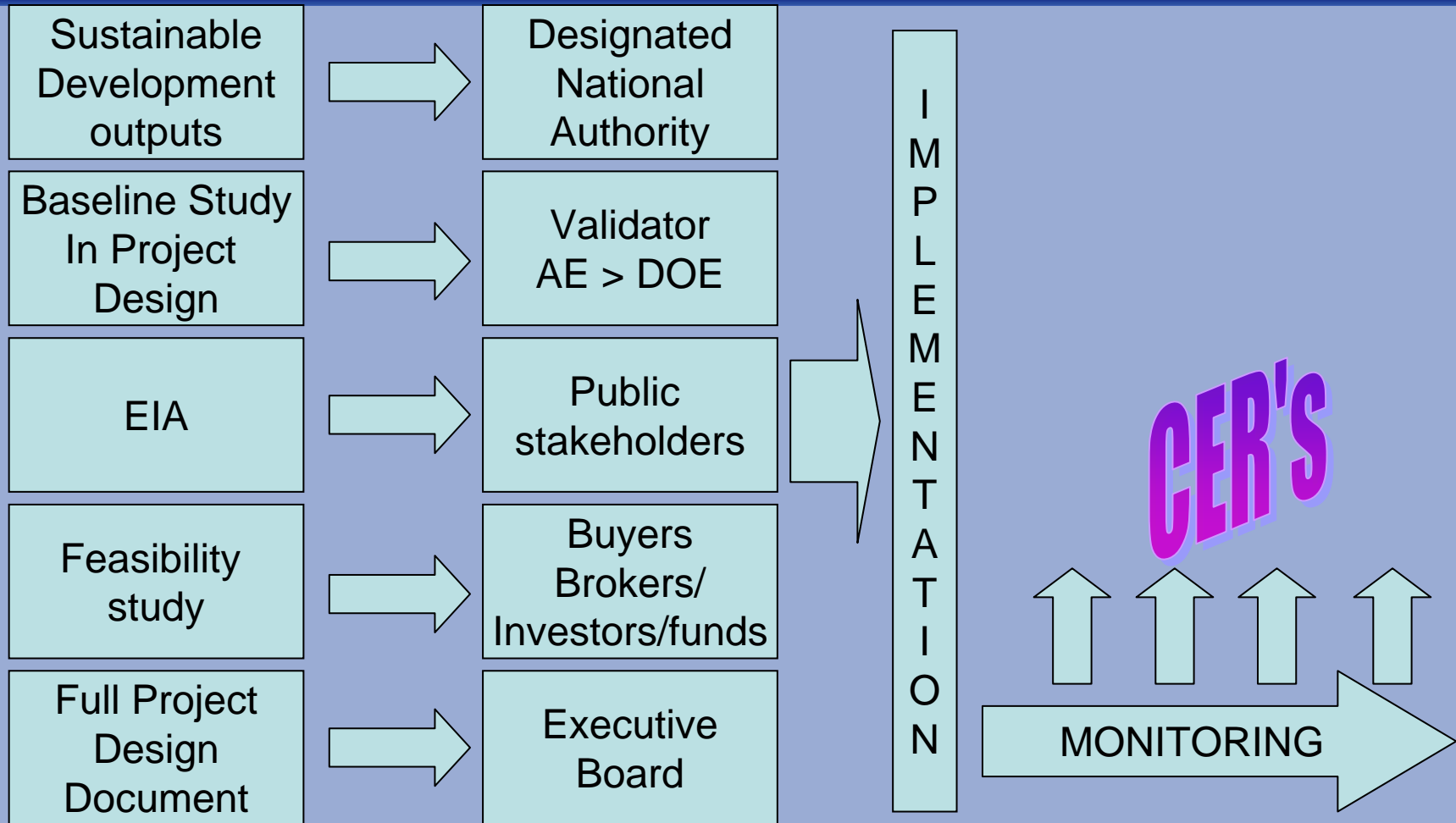
## CDM Institutions

- UNFCCC secretariat/ “CDM Team”
- COP/MOP
- Executive Board
- Panels and working groups
- Validators/Verifiers
- Project Participants
- Project facilitators
- Brokers/Consultants
- CER buyers



# CDM project activity cycle









<http://cdm.unfccc.int/Reference/Procedures/index.html>

**Executive Board related procedures**

**Panel related procedures**

**Accreditation related procedures**

**Methodology related procedures**

**Methodology related procedures for afforestation and reforestation project activities**

**Validation related procedures**

**Registration related procedures**

**Issuance related procedures**

**Programme of activities**





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# M1. Introduction and recap



- CDM Project cycle (SSN)





## Elements of the project appraisal (SSN)

- CDM assists Annex 1 countries in meeting their emissions reduction targets in return for income for credits derived from projects that contribute to sustainable development

....so sustainable development





- Eligibility
  - Has the country ratified the Kyoto Protocol?
  - Does the country have a functioning DNA?
  - Does the project contribute to SD?
  - Does the project result in GHG reductions?
  - Are the emissions reductions real and measurable?
  - Is the project additional?
  - Does the project result in a diversion of ODA?
  - Is the project mitigation of A/R sinks?
  - No nuclear!
- Feasibility
  - Does the technology work?
  - Is there capacity to install, operate, and maintain the technologies?
  - Does the finance work?
  - What are the barriers (financial, technical, capacity, institutional, normative etc.)?
  - What other risks exist?





Real and measurable

“The process of prediction and subsequent monitoring and refining applies to the emissions from the project activity...

it follows that the parameters that are required to calculate the actual emissions reductions, can be monitored and accurately measured over time.

The difference between the baseline emissions and the emissions from the project activity will, of course, amount to the measured reductions in greenhouse gases as a result of the project.”

Reference from toolkit.





Does the project result in GHG emissions?

- What would happen without the project activity (baseline scenario)?
- What would happen in the project activity (project scenario)?





## Is the project additional?

- What would have happened in the absence of the project activity?
- Additionality test: Standard tool may be applied
- Investment analysis (IRR/NPV/Payback of base-case i.e. without emissions reductions) is this conservatively below the investment threshold?
- Barrier tests (are there technical, normative, investment, other barriers)





## Process of project identification and design

- Concept – Project Identification Note (PIN)
- Pre-feasibility
- Feasibility (technical, financial, legal etc.)
- Project Design Document (PDD) is required to register a CDM project
- [www.cdmguide.com](http://www.cdmguide.com)







- A/R? An A/R CDM project activity is an afforestation or reforestation measure, operation or action that aims at achieving net anthropogenic GHG removals by sinks.
- “Afforestation” is the direct human-induced conversion of land that has not been forested for a period of at least 50 years to forested land through planting, seeding and/or the human-induced promotion of natural seed sources.
- “Reforestation” is the direct human-induced conversion of non-forested land to forested land through planting, seeding and/or the human-induced promotion of natural seed sources, on land that was forested but that has been converted to non-forested land. For the first commitment period, reforestation activities will be limited to reforestation occurring on those lands that did not contain forest on 31 December 1989.





## Sustainable Development

- What does the Tanzanian DNA say?
- Gold Standard projects?





## Local/regional/global environment

- Water quality and quantity
- Air quality (emissions other than GHGs)
- Other pollutants: (including, where relevant, toxicity, radioactivity, POPs, stratospheric ozone layer depleting gases)
- Soil condition (quality and quantity)
- Biodiversity (species and habitat conservation)

Sub total

## Social sustainability and development

- Employment (including job quality, fulfilment of labour standards)
- Livelihood of the poor (including poverty alleviation, distributional equity, and access to essential services)
- Access to energy services
- Human and institutional capacity (including empowerment, education, involvement, gender)

Sub total

## Economic and technological development

- Employment (numbers)
- Balance of payments (sustainability)
- Technological self reliance (including project replicability, hard currency liability, skills development, institutional capacity, technology transfer)

Sub total

**TOTAL**





## First step appraisal tool – does the project activity reduce emissions?

The first step would be to consider a simple baseline for the project. The simplest place to begin is to consider the boundary for your project and to decide what is happening now in your project boundary (plant or area of activity) or rather what is the status quo. (In the case where the project introduces a service new to the area, the technology that would normally have been used and its emissions constitute the baseline.)

The emissions from this status quo are considered as an initial estimation of baseline emissions (please note: this is a lesson you will be asked to unlearn later). The next step would be to estimate the emissions from your candidate project activity. Are the emissions of the project activity lower than the baseline emissions for the same level of activity? If the answer is yes, then your project does reduce emissions of GHGs.



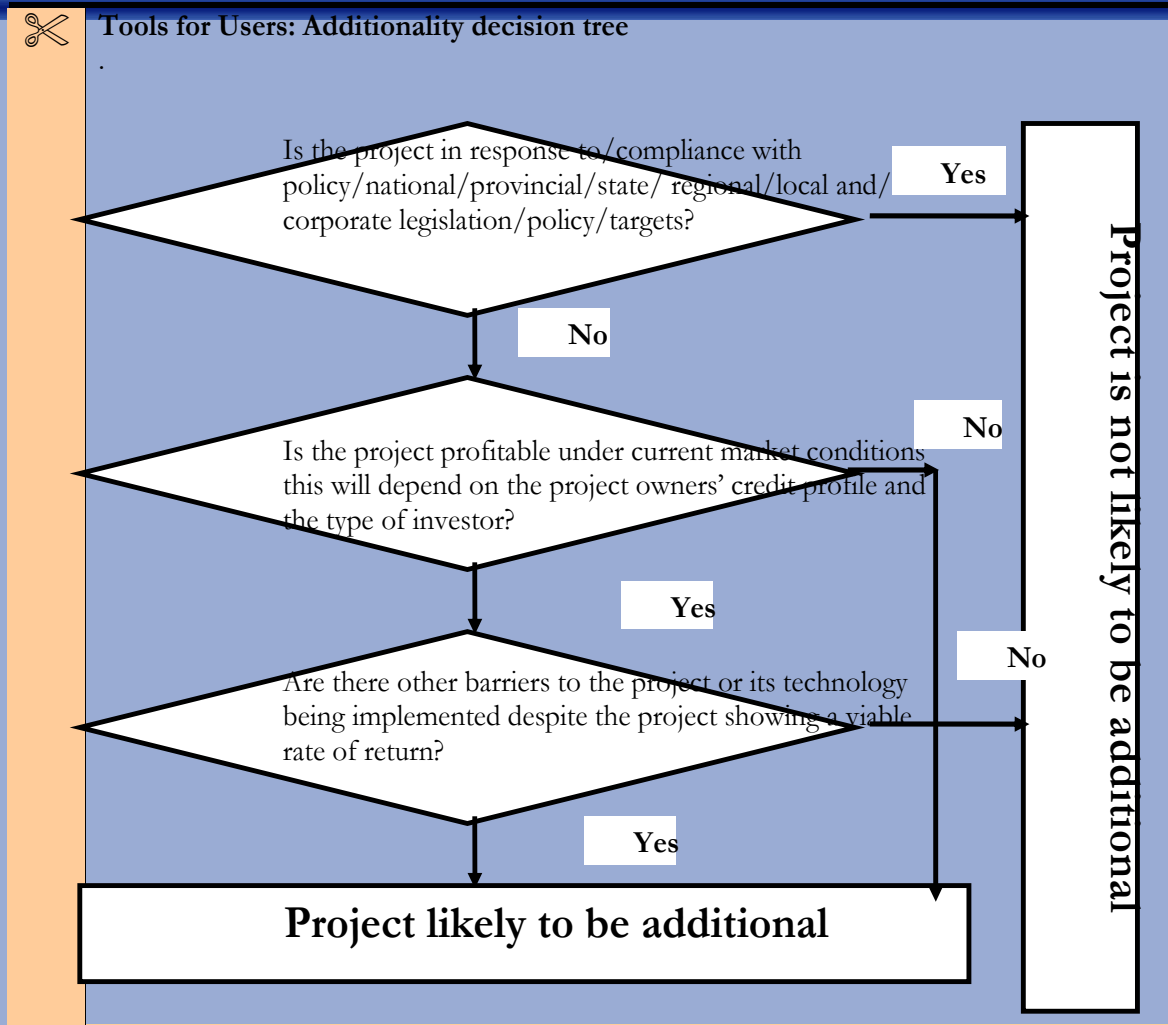


## Simple discounted cash flow analysis: Project Base Case

### Discounted cash flow analysis

Years	0	1	2	3...	10...	21
<b>Capital costs</b>						
Planning and feasibility						
Technology						
Training and commissioning						
<b>Sub-total</b>						
<b>Operating costs</b>						
Energy and water						
Labour						
Maintenance						
Decommissioning						
<b>Sub-total</b>						
<b>Income</b>						
Sale of product						
Other income						
<b>Sub-total</b>						
<b>Total</b>						
<b>Internal Rate of Return</b>						
<b>Net Present Value</b>						
<b>Nominal Payback Period</b>						







## Tools for Users An Eligibility Checklist

1. Is your project nuclear? NO -
2. Is your project LULUCF? YES - ? [→ reading on page ]
3. Is your country a non-Annex 1 country? YES -  [→ Appendix]
4. Has your country ratified the KP? YES -  [→ [www.UNFCCC.int](http://www.UNFCCC.int)]
5. Does your project contribute to your country's sustainable development? YES -  [→ Module 16]
6. Does your country have a DNA in place? YES -  [→ [www.unfccc.int](http://www.unfccc.int)]
7. Does your project impact the environment negatively and if so, will it comply with your country's EIA requirements? YES -  [→ Module ?]
8. Will your project reduce/avoid GHGs? YES -  [Modules ? and ?]
9. Will this reduction/avoidance be real and measurable? YES -  [ditto]
10. Will this reduction/avoidance be additional to the BAU scenario? YES -  [ditto]
11. Will your project divert ODA? NO -





## Tools for Users

Screening Tool: ODA	Yes	No
1. Is your project in any way financed from public funding? If no, your project is additional and you have completed this screen. If yes, go to the next question.		
2. If your project is funded in whole or in part by public funding, is any of that funding sourced from an Annex I party? If no, your project is additional and you have completed this screen. If yes, go to the next question.		
3. If your project is funded in whole or in part by ODA from an Annex 1 party, is this funding additional to its normal ODA contributions? (You will have to obtain a certificate from the Annex 1 party to prove this). If yes, your project is additional and you have completed this screen. <b>If no, go to the next question.</b>		
4. If your project is funded in whole by such diverted ODA, then it falls foul of the rules. If the project is funded in part then you should continue to Module 52, but reconsider your funding strategy.		







- Does the technology work?
- Is the technology mature?
- Is the technology new to the region?
- Will the technology work in the region?





Is there capacity to install, operate, and maintain the technologies?





- Does the finance work?
- Is the rate of return/Net Present Value/Payback period sufficient to interest the investor?





- What are the barriers (financial, technical, capacity, institutional, normative etc.)?
- Do these barriers imply changes in interest of investors?
- Technology issues:
  - is the project greenfield or retrofit?
  - Is the technology new to the region or is there existing experience/track record in the region?





- Risks?
- Projects and CDM projects in particular are all about risk and risk mitigation....





- End of appraisal





# Elements of the CDM project





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# M3. Elements of the CDM project



Time line 13:30 – 15:00

- Exercise 2 - project selection (hypothetical case study) (SSN)
- Project size – small scale projects Modalities and Procedures
- Project boundaries
- Project baselines and additionality
- Public participation
- Project architecture
- Internal and external architectures
- Gold standard projects







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# M3. Elements of the CDM project



- Gantral exercise part 2 project selection and rating





## Project size

- Small-scale and “regular”
- Size determines project design requirements and parameters
- See separate presentation on small scale project activities...



# M3. Elements of the CDM project



## Project boundary

- Definition: “The project boundary shall encompass all ...emissions ... of (GHG) under the control of the project participants that are significant and reasonably attributable to the CDM project activity.”
- What’s inside and outside the project boundary?
- What emissions are directly as a result of the project?
- What emissions can be considered as “leakage”?
- Which leakage must be included and which can be excluded?
- Definitions: <http://cdm.unfccc.int/Reference/Documents/Pdd>

# Project baselines and additionality



- Separate presentation on baselines and additionality





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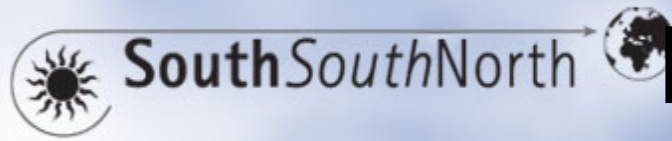


# New and existing baseline methods



- Small-scale projects are dealt with top-down – baselines are already set.
- “regular” size projects can make use of existing baseline methodologies.
- If the baseline has not already been approved new baseline methodologies can be proposed (follow guidelines on [cdm.unfccc.int](http://cdm.unfccc.int))





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# Public participation



- Separate presentation



# Project Architecture



- Consider landfill examples in the appendix to the supporting documentation
- Undertake exercise on the Durban and Cape Town landfill projects appraise against SD criteria
- Present and discuss the outcome of the project selection and appraisal
- Architecture can be considered as internal (to the project) or external in relation to investors/CER buyers

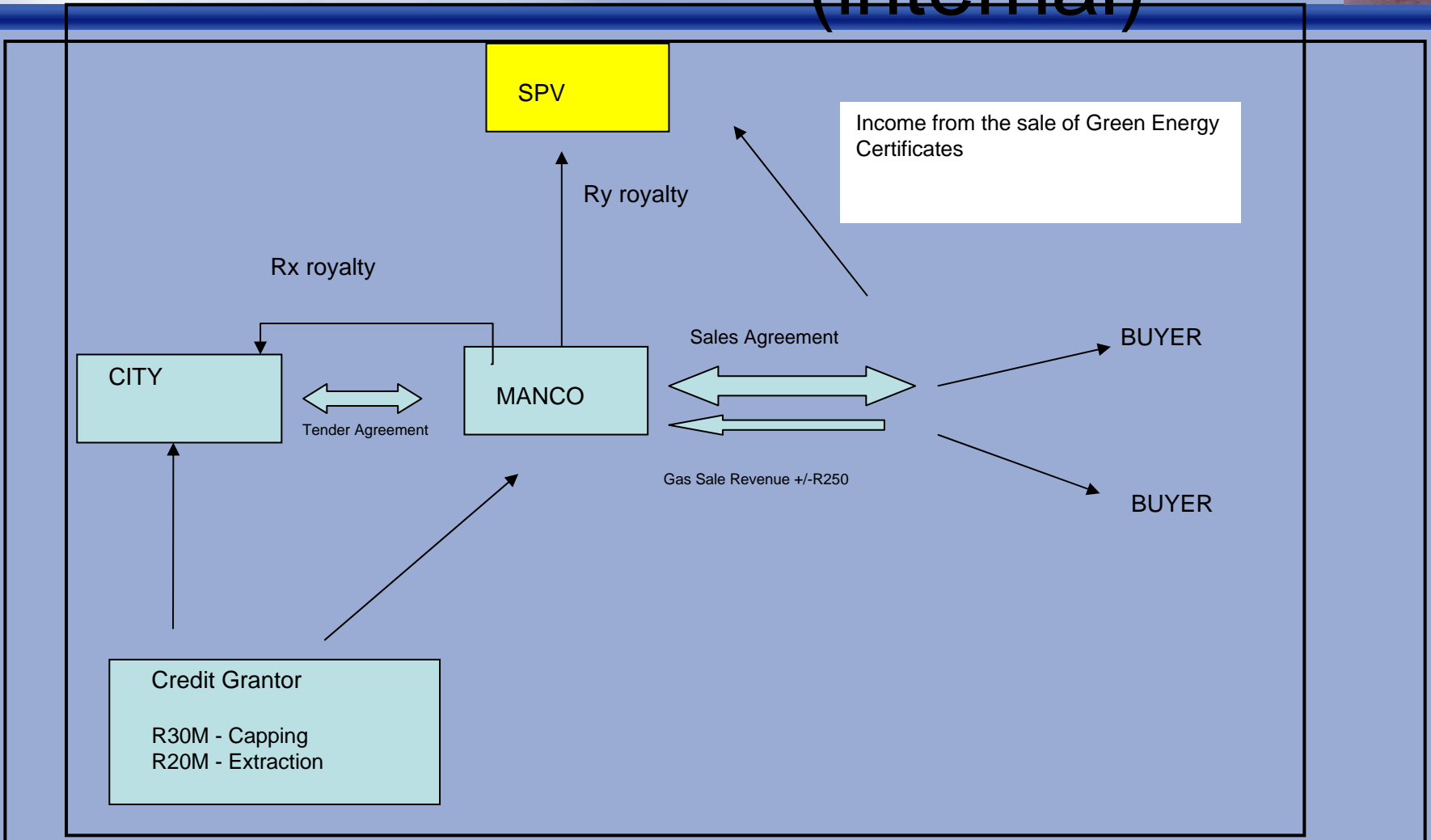




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# Project architecture (internal)





# Project architecture (external)



- Unilateral projects
- Bilateral projects
- Multilateral projects
- Hybrids – mixtures of uni-, bi- and multi lateral projects



# Gold Standard projects



- “Positive list” of technologies eligible.
- Higher level of stringency in additionality and baselines. Baselines reviewed by local expert.
- SD indicators as per exercise.
- Higher degree of public participation required.
- No use of ODA in project or project activity.
- Will be validated by normal Operational Entities.
- Will attract a premium. Buyers already looking for GS projects.





# Module 4: Sustainable Development and the DNA approval





15h30 to 17h30

- Status of the CDM in Ghana/first National Comms/DNA in Ghana (CFP)
- The DNA approval process (CFP/SR)
- Read and discuss the matrix (SSN)
- Exercise 3: rate 2 landfill projects (ST)
- Introduction to project concept identification and description (ST)
- Presentation 2 accepted small scale PDDs from UNFCCC website (Kite)





- Approve that project activities contribute to host country SD
- Cede CERs to project participants
- Voluntary: promote country projects, locate sources of funding etc.





- Separate presentation
- Provide SD Matrix read and discuss
- Debate additional/alternative requirements
- Exercise use the 2 landfill examples to rate projects





- Exercise 3: rate 2 landfill projects (ST)





- Introduction to project concept identification and description







## Project concept

- Project Name, owner and beneficiaries
- Project Objective and Background on the identified proposed activity
- Proposed Project Activities
- Proposed Project Outputs
- Background information on the institutional arrangements
- Eligibility Criteria: Please give information to illustrate that the project is eligible (see above)
- Cost of project.





- Presentation of 2 acceptable small-scale PDDs from UNFCCC website (Kite)





- Overnight: Exercise 4: List project concepts in Ghana (all)





# Module 5: Real Ghana project appraisal





- Exercise 5: Present and discuss concepts (all)
- Prefeasibility tests of concepts
- Introduce Technical and Financial Risk (ST)





- Technical and financial risks (see separate presentation)





# Module 6: PINs Towards workshop 2





- Project Identification Notes – how to structure them (including eligibility, baselines and additionality)
- 2 projects from SSN experience
- Exercise 6: Prepare draft PINs (SSN)
- Introduction to Project Design Document







- Barry could you put in the toolkit PIN and how it links to previous modules.





- 2 SSN projects (separate presentations)





- A. General description of project activity
- B. Application of a baseline methodology
- C. Duration of the project activity / Crediting period
- D. Application of a monitoring methodology and plan
- E. Estimation of GHG emissions by sources
- F. Environmental impacts
- G. Stakeholders' comments

## Annexes

- Annex 1: Contact information on participants in the project activity
- Annex 2: Information regarding public funding
- Annex 3: Baseline information
- Annex 4: Monitoring plan

Reference <http://cdm.unfccc.int/Reference/Documents>





- A. General description of the proposed A/R CDM project activity
- B. Application of a baseline methodology
- C. Application of a monitoring methodology and plan
- D. Estimation the net anthropogenic GHG removals by sinks
- E. Environmental impacts of the proposed A/R CDM project activity
- F. Socio-economic impacts of the proposed A/R CDM project activity
- G. Stakeholders' comments

## Annexes

- Annex 1: Contact information on participants in the proposed A/R CDM project activity
- Annex 2: Information regarding public funding
- Annex 3: Baseline information
- Annex 4: Monitoring plan





If mitigation then ...

- If small-scale use Appendix B
- If regular use existing methodology or prepare

If A/R then ...

- If small scale go to
- If regular use existing or construct new methodologies
- All documents and guidelines are given in <http://cdm.unfccc.int/Reference/Documents>





- Contents of workshop 2
- PIN and PDD preparation (How to fill each section)
- Common pitfalls
- Baseline methodologies examples of baseline methodology relevant to national circumstances
- CDM project financing
- Approaches to investment analysis
- Benchmarks
- Sensitivity analysis for CERs impact on project economics
- Status of global carbon market
- Types of emission reduction purchase programs/agreements
- Preparation for workshop 2

