



# Training Workshop

## Introduction to Validation, Registration, Monitoring, Verification and Certification

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# Training Workshop

## Theme 3: GHG Emission Verification

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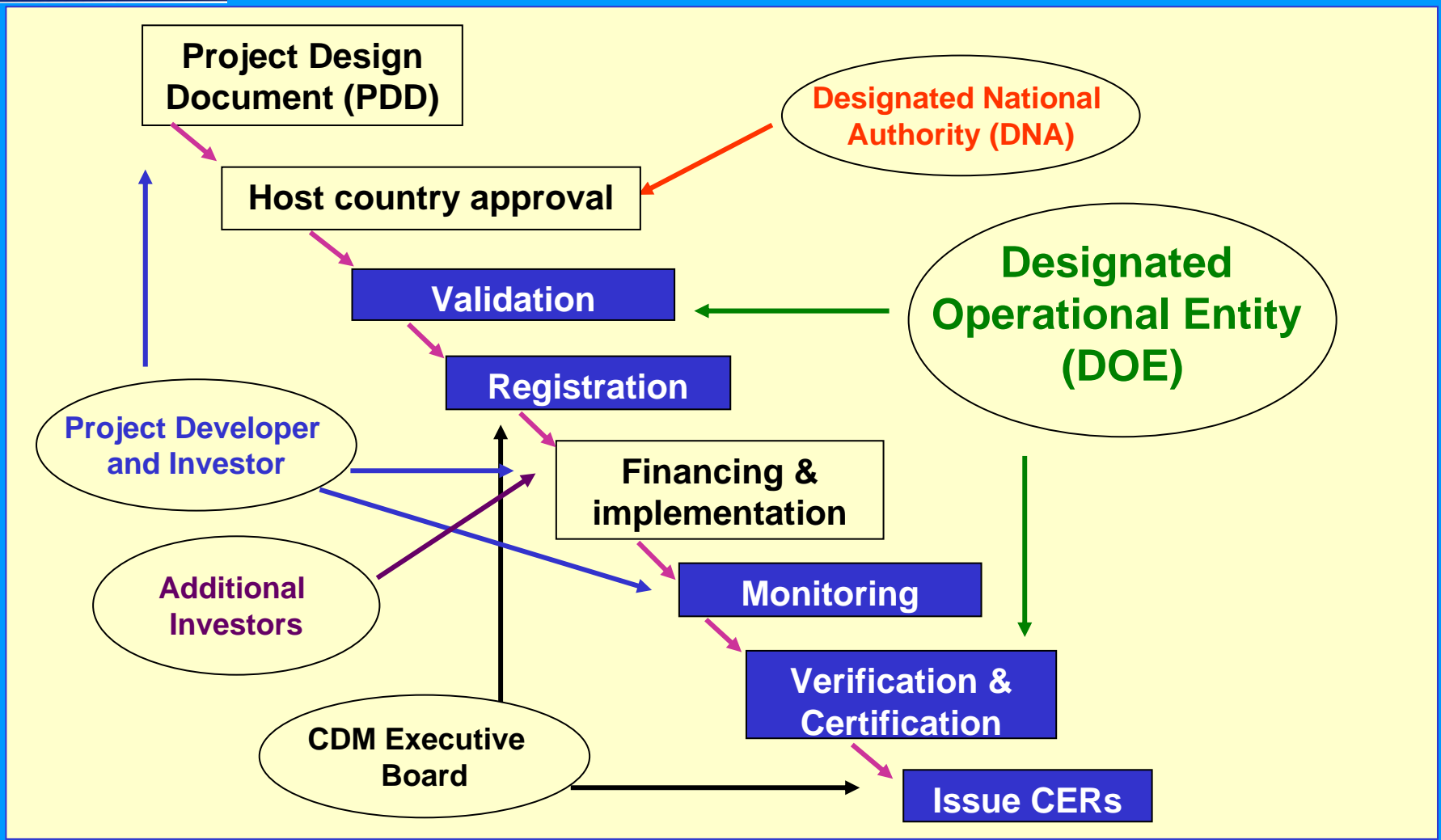
The presentation will answer the questions ...

- When is Verification done?
- Who can act as Verifier ?
- What is verified and how ?
- What experiences exist ?





# CDM Project Cycle





# The Legal Background

**“Verification** is the periodic independent review and ex post determination by the designated operational entity of the monitored reductions... during the verification period. Certification is the written assurance ... “

Marrakech Accords



# Requirements on Verification

MA	Requirement
§ 62	DOE has to make monitoring report public available
§ 62 a	Confirmation of accordance with requirements of registered PDD
§ 62 b	Review of performance records, established practices, accuracy of equipment etc.
§ 62 d	Completeness and transparency of documentation, correctness of results and application of methodologies
§ 62 e	Recommendation of changes for future crediting periods
§ 62 f	Determination of emission reductions
§ 62 h	DOE has to make verification report public available
§ 63	Take over liability by certification decision



# Who verifies / what is required?

- Different DOE as for validation, unless CDM Executive Board accepts the same DOE
- Verification is more project specific than Validation
- Greater contribution by local experts are required
- Verification provides information on risks of future future data quality



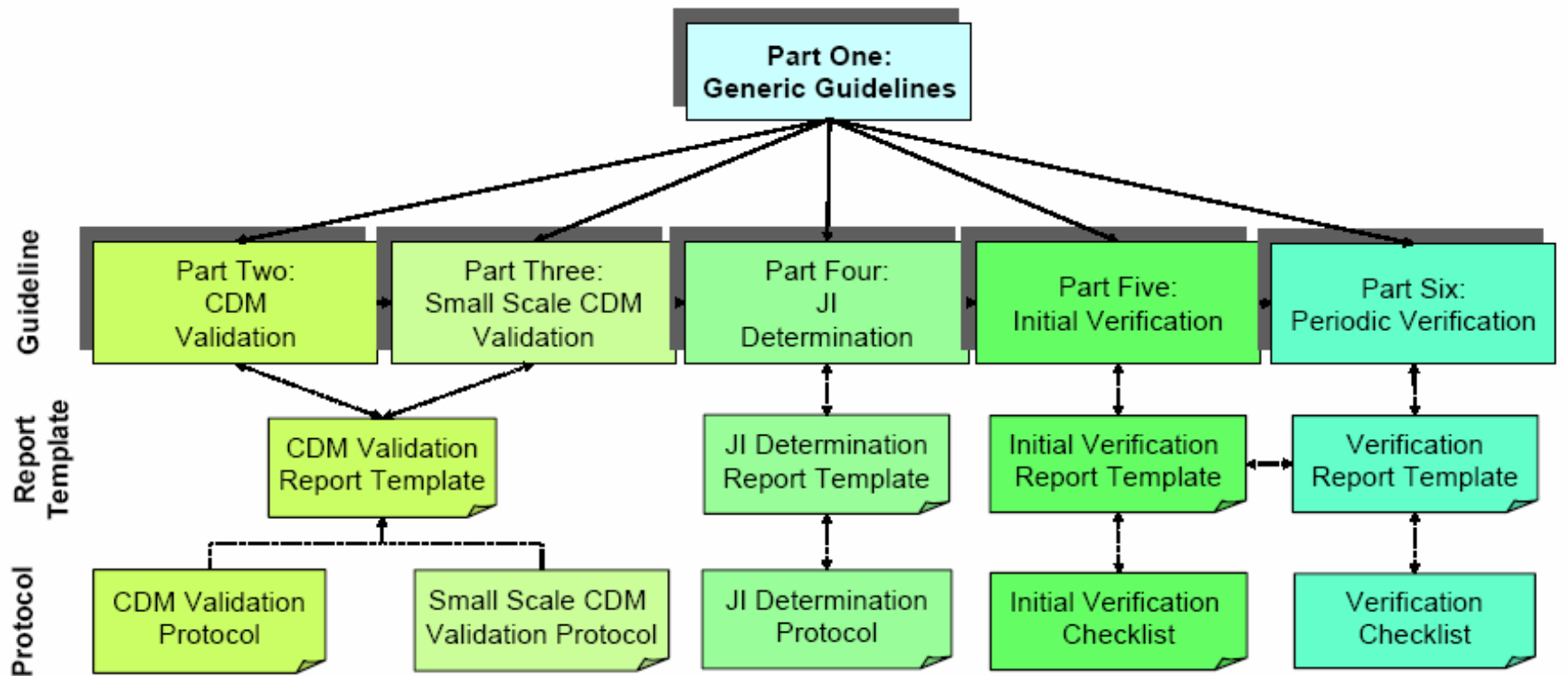
## What is verified ...

- Is the project in place due to registered PDD ?
- Is all required metering equipment installed correctly ?
- Has personnel been trained and is aware of its tasks ?
- Is the data flow (including spreadsheets) free of errors and free of biases?
- Is a quality management system for the project being installed ?
- Are environmental or social measures in place ?
- What are the real GHG emission reductions during the verification period ?

Verification is backed with on-site inspections and audits



# TÜV-Süd - Practical Implementation



<http://www.vvmanual.org>



# Initial vs. Periodic Verification

## Initial Verification (Objectives)

- Project implemented and installed as planned?
- Monitoring system in place and fully functional?
- Assurance that project will generate verifiable and high quality emission reductions
- Approve adjustments and amendments to the monitoring plan that may have become necessary during design and construction

## Periodic Verification Objectives)

- Approve if actual monitoring system / procedures are in compliance with those described in monitoring plan
- Evaluate GHG emission reduction data, express a conclusion with a high, but not absolute, level of assurance about whether the reported GHG emission reduction data is “free” of material misstatements
- Confirm the reported GHG emission data is sufficiently supported by evidence (i.e. monitoring record)

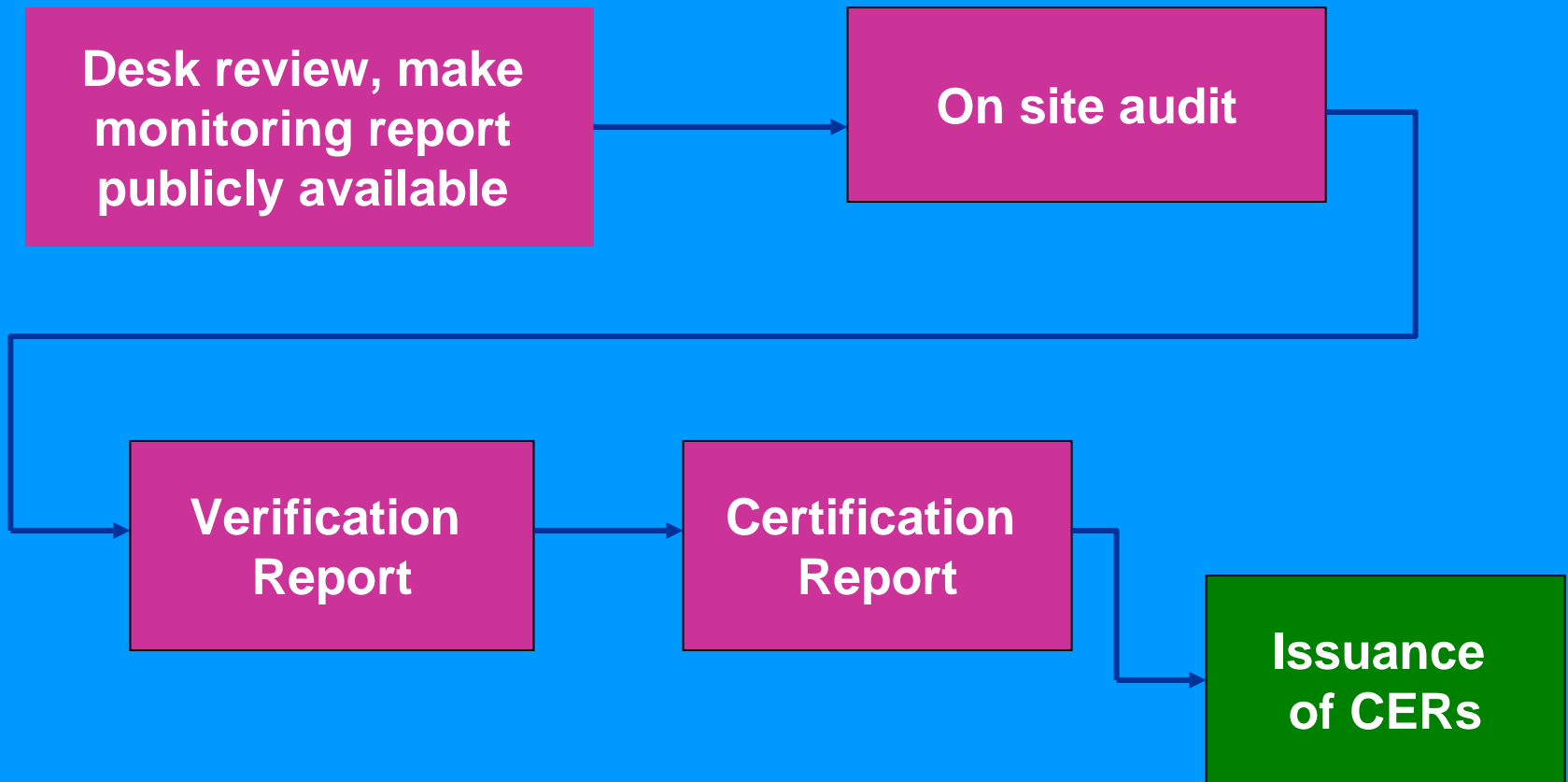


# TÜV-Süd: Experience with Verification

- High quality of raw data in all cases
- quality assurance due to national standards, but differences in standards standards
- Requirement of software tests (lack of internal tests)
- Most requirements for compliance tests are set by the monitoring plan --> verification is more project-specific than validation
- Bias to neglect environmental and social indicators
- Routines and procedures are well performed by the fresh project procedures team, but mostly not documented in a management system



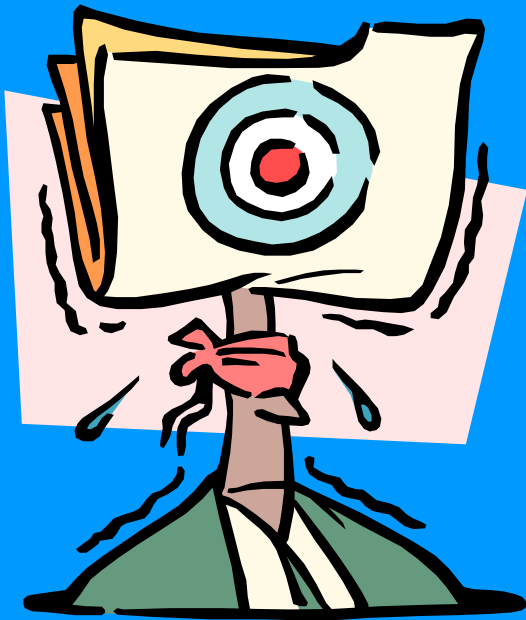
# DNV - Verification Process





# Contracts with DOEs

Be prepared to read the small print carefully!



General Terms and Conditions  
&  
Special Terms and Conditions



# TÜV-Süd (CMS - Z)- Content of General Terms and Conditions (1)

## General

- Client shall inform Validators prior to placing an order, if the project intended for auditing has already been the subject matter of a similar order placed with another institution
- Client agrees to let representatives from the accreditation body /auditors on the business premises of the client/manufacture/his or her subcontractor
- DOE is entitled to disclose the testing file to authorise parties such as the accreditation bodies



# TÜV-Süd (CMS-Z) - Content of General Terms and Conditions (2)

## Advertising / publishing certificates / certification marks

- System related certificates or certification marks may only be used in system-related advertising, certificates of conformity or a TÜV mark may only be used to advertise for the certified plant / project
- Use of the verification report or the name of (CMS-Z: Carbon Management Service) for advertising purposes is subject to prior written approval
- CMS-Z is entitled to publish the names of certificate holders, citing the date of issue, verified products and projects and audited management systems etc. for consumer information and advertising purposes



# TÜV-Süd (CMS-Z) - Content of General Terms and Conditions (3)

## Certification / testing procedure

- Discussion in advance on contents, schedule, standards ..
- Client to appoint a person in charge of certif. procedure
- Client shall be entitled to object to designated auditor, may be informed about the auditor's experience (2 years)
- On-site inspections: formulation of an auditing plan / checklist to be sent to client prior to inspection
- Closing meeting. Nonconformity reports will include the necessary corrective actions, costs for re-testing shall be based on efforts involved
- Issuance of certification mark upon satisfaction (all requirem.)



# TÜV-Süd (CMS-Z) - Content of Special Terms and Conditions (4)

## Governing Testing of Climate-Change Projects

- Provide authorisation to DOE to carry out pre-validation, verification, certification of climate change projects, client to submit the required documentation including licenses etc.
- CMS-Z shall have the option between a pure document review or by means of additional on-site inspections.
- When certificate expires or becomes invalid, it may not be longer used for advertising purposes.
- Certificate holder must inform Certification Body without delay of any major changes in underlying conditions that would considerably impact the issue of the certificate of conformity.



# Open Issues in Verification

- Guidance on the treatment of uncertainties is missing in the MA and EB (discount vs. acceptable uncertainty level)
- Improvement of methodology plan would lead to new “transaction Costs” by an additional validation of such a revision
- Who should validate revisions - the original validator, the verifier or another DOE?
- How to deal with differences in standards (norm temperature)
- How to deal with missing social or environmental indicators?
- Templates for Monitoring Reports?



# Be reminded ! Tips for approaching DOEs for Verification

## Step 1

Prepare an official letter titled e.g. "Request for Verification Services"

## Step 2

Identify accredited DOEs that can do a Verification for your project type, see project scope

## Step 3

Send letter and request an offer form several identified DOEs entitled for Verification

## Step 4

Negotiate a deal with preferred Verifier

## Tip 1

Follow a step approach for selecting the most suitable Verifier

## Tip 2

Prepare well for price negotiations with selected DOE



# Questions?





**THANK YOU**