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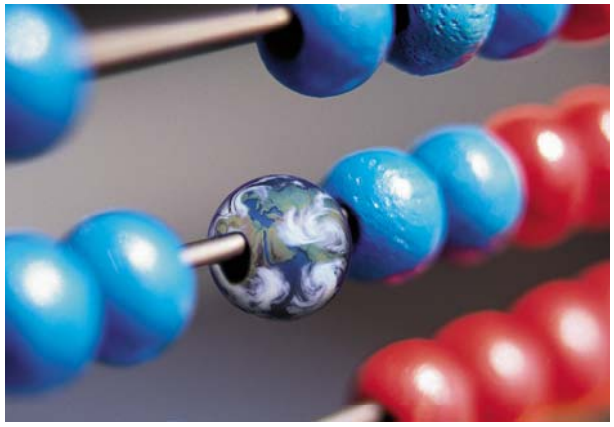
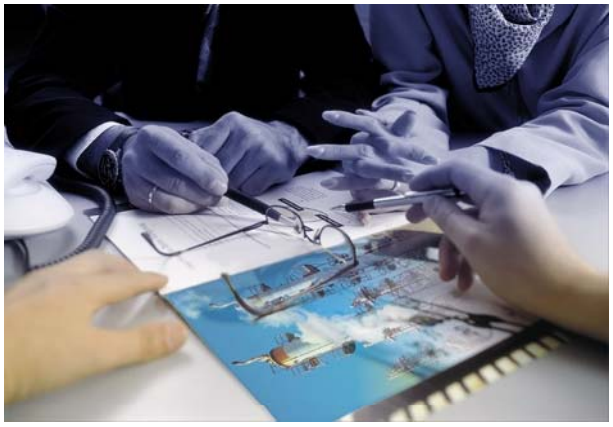
REDD – lessons that can be learnt from AR-CDM and first audit experiences

Martin Schroeder – Lead Auditor Forestry - CATIE, 28 Oct. 2008


Overview

- Short Intro to TÜV SÜD and the auditor's world
- What is validation and verification?
- Lessons for REDD from AR auditing
- Experiences in the validation of first REDD projects

What TÜV SÜD Does

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Consulting Testing Certification Training

on behalf of industry, trade and commerce, public institutions and private individuals.

- 13,000 staff
- 600-plus locations worldwide
- 2007 sales: Euro 1,271 million
- Headquarters: Munich (Germany), Peabody (USA), Singapore (Asia)
- over 140 years of business success

www.tuev-sued.de/climatechange



TÜV SÜD Industry Service and CMS

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- As part of TÜV SÜD Industrie Service GmbH the Carbon Management Service (CMS) was founded in 2000
- The CMS team consists of >40 professionals in the HQ in Munich.
- Worldwide >60 auditors active for CMS within regional TÜV SÜD branch companies.
- Work approach: as decentralized as possible with technical and regulatory backstopping from Munich
- A key asset of CMS is the high level of technical expertise present in-house.

The project cycle

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① **Project development → PDD**

climate change project

⑤ **Carbon Merchandising**

② **• Validation**
• Registration

④ **• Verification**
• Issuance

③ **Project implementation, incl. monitoring**

Validation and verification

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Validation

„Validation is the process of independent evaluation of a project activity by a designated operational entity against requirements of the CDM …"

- Pre-condition for registration of project activity

Verification

"Verification is the periodic independent review and ex post determination by the DOE of the monitored reductions… during the verification period. Certification is the written assurance…"

- Pre-condition for issuance of CER's
- Assessment of conformity with approved monitoring plan

Validation process CDM

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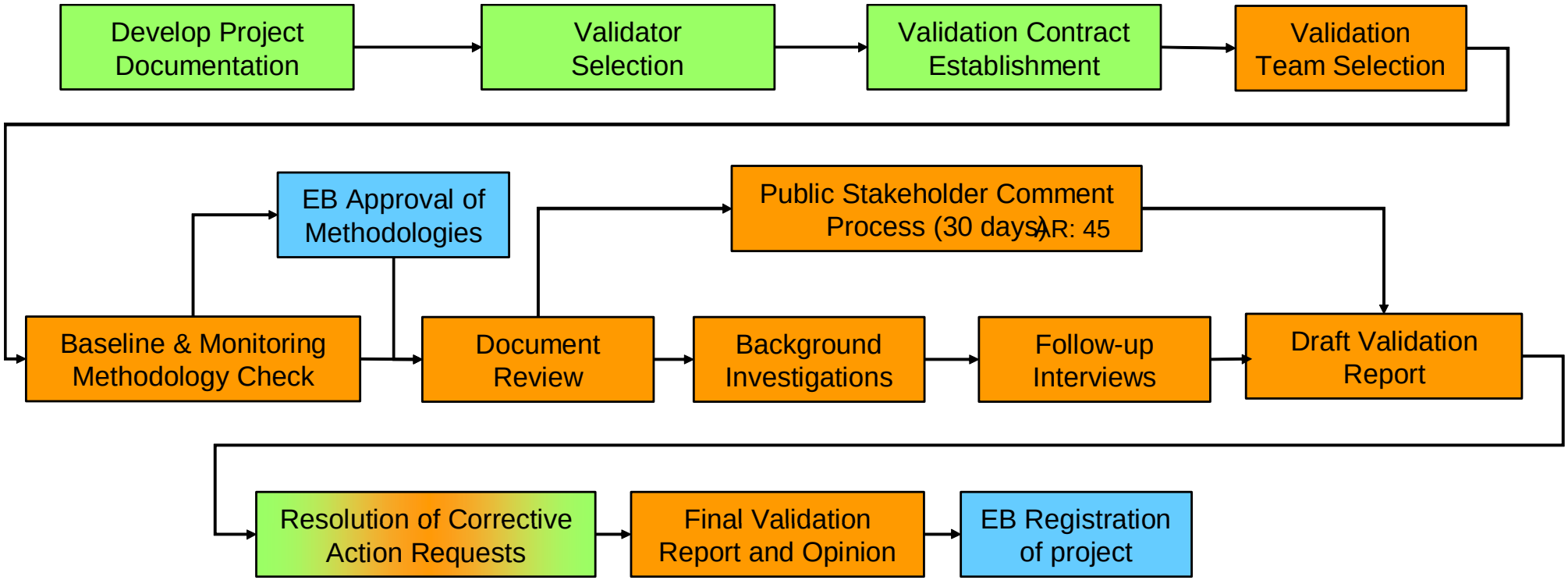
The validation process in detail



….and this would be similar for audits according to VER standards

TÜV SÜD services in forestry

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The options in standards for forestry:

1. Project based mechanisms of the Kyoto Protocol
   - **CDM**, afforestation/reforestation
   - **JI**, forest management, conservation, etc.

2. Other emerging emissions trading regimes
   - Chicago Climate Exchange (**CCX**)

3. Voluntary standards
   - **VCS**
   - **VER+**
   - **CCB***

* Focus on co-benefits of land-use projects, mostly combined with other carbon standard

Reminder: Typical methodology contents

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Baseline and Monitoring Methodologies and their compliance are the heart of any PDD – which is the key document focused at in an audit!

Section I. Summary and applicability

- Selected baseline approach, Applicability conditions, Selected carbon pools and emission sources

Section II. Baseline methodology description

- Project boundary, Selection of most plausible baseline scenario, Additionality, Estimation of baseline effects, Emissions, Leakage, Ex ante net anthropogenic effects

Section III: Monitoring methodology description

- Monitoring of project implementation, sampling design, formulae and data to be monitored for baseline, ex post effects, emissions, leakage, Uncertainties

Current trends at TÜV SÜD

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- **Afforestation / Reforestation**

- Forestry projects currently about 50:50 between VER and CDM
- If VER, then mostly VCS
- About 50% opt for CCBA as an add-on to VCS or CDM
- Increased activity level and more movement in projects

- **REDD**

- Increased interest and numerous Requests for Proposals
- Mostly VCS. Again, projects opt for CCBA on top. TÜV SÜD offers CCBA standalone (version 01) only if baseline & monitoring methodology requirements as per VCS, VER+ or CDM are met.
- Handful of first movers with advanced PDDs
- All struggling with methodology development and approval (sit and wait or bear the pain?)

Some impressions on AR-CDM

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- ✓ Up to now, high quality projects with mutual ecologic and social co-benefits
- ✓ Early movers have gained hard lessons learnt in methodology approval process.
- ✓ Applicability remains narrow. Differences among meths unclear to players.
- ✓ Number of consultants working in the field is limited and expands slowly.
- ✓ Participants on the ground with vague knowledge on process and requirements - underestimation of the complexity of (AR-)CDM.
- ✓ Interest of compliance market reduced due to i) small volumes up to 2012, ii) unclear demand (i.e. no EU-ETS) and iii) unfamiliarity with AR-CDM. VER on the rise.

AR-CDM: Reasons for slow motion

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There are not more project registered, because…

- AR-CDM was operational later than regular CDM and methodology developement took time.
- Methodologies have tried to be all-including on emissions, increasing work & monitoring burden
- Large scale was applied where small scale could have worked
- DNAs partially not familiar with AR-CDM. More time for LoA emission, forest definition, „low income community“ - definition
- In project design key pitfalls are detected late by (unexperienced) participants / developers
- On the formal side: AR-CDM players are unfamiliar with processes (audit and UNFCCC related)
- Project setup & design: High number of landholders generate co-benefits but require robust institutional setup for implementation, documented carbon and land access, more boundary work etc…

Lessons learnt from AR-CDM for REDD

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1. Conclusions on methodologies:

- Wider Applicability required: Criteria need to fit more than one project!
- Consolidated methodologies should be targeted.
- Modular approach with tools for specific emission sources may increase flexibility in meth design.
- The coverage of meth tool requirements should be supported with further background data (i.e. defaults) and (Excel based) calculation tools.
- No overloading of methodologies. While all significant and attributable sources of emissions need to be considered, a significance check and use of defaults may reduce development and monitoring burden.

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2 Conclusions on required capacities / expertise

Compliance in project design and formal processes define success.

a) Project design aspects

Best practice and efficient coverage of meth requirements is needed so that gaps are not identified recently in the audit. Relevant fields:

- Boundary definition (areas that would be deforested)
- Baseline estimates, including the modelling of deforestation
- Carbon inventory approaches (baseline and project)
- Definition of project activities resulting in an attributable C-effects
- Leakage estimate and monitoring (attributable, in defined areas)
- Carbon Monitoring (i.e. inventory approaches chosen)

Lessons learnt from AR-CDM for REDD – cont.

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b) Formal processes

- As seen in AR-CDM, forestry projects are still less „dominated“ by large and professional project developers with procedural expertise (frequently project owner = PDD developer).
- If this approach is pursued, focus would need to be given on training on procedures around standards, auditing, issuance etc. for these mostly local organizations.
- Otherwise project alliances of project owners and entities / consultants that dispose of process expertise are necessary. This approach has become common practice in all other fields of the carbon business.

Note: Currently REDD is only feasable as VER. Hence, VER specific expertise is also required (choice of standard, permanence approach).

REDD - The big picture

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- National and project based approaches, as well as hybrids are discussed.
- REDD- a bargaining chip in the negotiations on the way to reduction targets for developing countries? Rules / decisions will co-define demand!
- The voluntary market moves ahead, a growing interest exists in VER-REDD projects. A key item that triggers interest is quicker issuance of substantial amounts.
- Voluntary standards (VCS / VER+ / CCBA as add-on) cover REDD.
- Urgent need for consensus on global best practice in REDD methodologies

REDD and TÜV SÜD

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- TÜV SÜD is currently auditing first REDD projects.
- Publicly available is documentation on the validation of the Juma Reserve Project in the Amazon region of Brazil (see CCBA webpage). CCBA finalized. VCS ongoing.
- Baseline: Continued expansion of road construction and unregulated settlement combined with insufficient forest control measures leads to deforestation.
- Project scenario: Improved forest control attributable to the project activity and alternative development options for local small holders leads to forest conservation.

First REDD audit experiences

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Applicability criteria:

- Key assumption: the project area would be deforested!
- This needs to be sustained. Frequent discussion if a permit for deforestation is sufficient evidence to sustain land use change.
- Conservative approaches are based on further deforestation evidence such as land use change models, which are calibrated for the region and which consider multiple drivers.
- The entire project area (boundary) should be actually under threat of deforestation during project lifetime.

First REDD audit experiences

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Included pools

- Always in: above and below ground biomass.
- Consideration of Litter and dead wood as well as soil organic carbon dependent on a) if the (future) methodology allows this and b) if trade-offs between additional tons that could be claimed and monitoring efforts are considered worthwhile.
- Soil carbon of special relevance for peatland forests with massive carbon stocks. Quantification and assumptions (evidence) on peat loss crucial. Specific meths likely

Included emissions:

- Fossil fuel emissions may be insignificant
- Main source are emissions from burning (N_2O, CH_4) - apart of stock changes (CO_{2e})

First REDD audit experiences

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In regard to stock changes

- Modelling of stock changes requires a clear identification of the land use to which a defined forest (strata) within the boundary would be converted in absence of the project.
- Result (at validation): Change matrix of vegetation / C-densities
- Applicable sources need to be available for this: credible data on baseline forest carbon stocks as well as the carbon densities in post-conversion land use. Sources: Inventory or literature based, if source applies to project conditions.
- Boundary is mostly defined by remote sensing or official data such as park limits. Uncertainty impacts to be considered.
- Otherwise standard forest inventory processes are applied (two/multi phase sampling) – this is also applicable to monitoring, and the ex-post verifed amounts.
- For monitoring / verification: changes must be measurable!

First REDD audit experiences

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Leakage

- Attributable emissions caused i.e. by displaced activities need to be considered.
- Discussions are frequent on limits of attributable leakage.
- Leakage belt apart of core project boundary likely to be necessary for assessment. This requires further monitoring efforts.

Project activities

- Defined activities need to clearly lead to avoidance of deforestation. Partially extended activities have been defined.

Additionality

- CDM additionality tool is applied: Note i.e. requirements on carbon finance consideration before project start.
- Partially interference with legal obligations on conservation.
- Mostly barrier approach chosen.

REDD – summary

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Any REDD initiative will need to deal with:

- ✓ Estimates on carbon stocks – in different forest strata as well as in land use classes to which forests are converted.
- ✓ Baseline setting: Estimation of deforestation for defined timeframes in the forest strata. Adaptations necessary, i.e. every 10 y. This requires definition of drivers of deforestation and conservative modelling. Evidence!
- ✓ Definition of attributable project activities (leading to conservation)
- ✓ Based on this, estimates on emissions avoided by the project
- ✓ Definition of a robust monitoring plan required, among others in order to detect possible land use changes in spite the project
- ✓ Actual issuance of carbon credits occurs based on later verification!

Thank you for your attention!

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