Process Based Standards

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What are process-based standards?

- Policy neutral accounting framework
  - "What to do" **not "**how to do it"
  - For clarity and consistency
  - Policy-neutral, non-sectoral, verifiable template
  - Specifications upon which a protocol can be customized
- Project standard:
  - Basis for GHG projects to be validated and verified
  - Allows comparison between two project types (using the same standard)
- **Product standard** – when used with verification = product of known quality

What are process-based standards?

- Two primary standards from two organizations:
  - International Organization for Standardization/ - ISO 14064-2: Specification with guidance at the organization level for quantification and reporting of GHG emissions and removals
  - World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) -The GHG Protocol for Project Accounting

ISO

- International Standards Organization
- ISO 14064-1 – Organizational level reporting of GHG emissions
- ISO 14064-2 – Project level quantification and reporting of emission reductions and removals
- ISO 14064-3 – Validation and Verification of GHG Assertions

Standardizing Protocols

ISO/WRI Standard	System Rules	Protocol application	Project Plans
•Defines the Requirements •Tells proponent what to do not how to do it •Generic, non-sectoral	•OS Rules narrow down requirements •Some procedures are given •Sectoral	•'Performance-based standard' approach: - simplified and prescriptive to achieve a certain level of performance •Project Type • Many criteria and procedures established and justified – the how to's	•Project specific • Must show they meet the requirements • Establish some criteria and procedures

ISO 14064-2 Principles

1. **Relevance** - select GHG sources and sinks, emission factors and formulae appropriate to the environmental integrity of the protocol.
2. **Completeness** – should consider all relevant GHG emissions and removals. Relevant information used to support decisions made in the quantification process should be transparently documented.
3. **Consistency** - to ensure meaningful comparison of GHG-related information. In particular, like emissions need to be compared in baseline and project scenarios – 'Functional equivalence".
4. **Accuracy** - reduce bias and uncertainties as far as practical; rely on IPCC and National Inventory methods as much as possible.
5. **Conservativeness** - conservative assumptions, values and procedures are used to ensure that GHG emission reductions or removal enhancements are not over-estimated.
6. **Transparency** - present your calculations, assumptions and decisions in a clear, upfront manner that facilitates review by reviewers, interested parties, verifiers - ultimately the Regulator wqill need this to accept the protocols.

SS Whats?

- What the heck is an SSR?
- **SSR –** Sources, Sinks and Reservoirs
- **Sink -** Any process, activity or mechanism that removes a GHG from the atmosphere
- **Source -** Any process or activity that releases a GHG into the atmosphere
- **Reservoir (GHG Reservoir or carbon pool)** – A component of the climate system, other than the atmosphere, which has the capacity to store, accumulate or release a substance of GHGs; examples include trees, soil, underground oil and gas reservoirs, and oceans.

Identifying GHG Sources Sinks and Reservoirs (SSRs)

- Identify SSRs and classify as controlled, related and affected
  - Controlled = owned, direct or primary effects
  - Physically related = upstream, downstream, trace products
  - Affected = economic and social consequences of a project impacting (eg. market effects and social changes)

Fundamentals of Offset Projects: "*Baseline - Project = Offset*"

- Project Condition
  - What happens (GHGs) in the improved practice/new technology?
- Baseline Condition
  - What was happening (GHG emissions) in the old practice, or common industry practice before the change? Business As Usual Practice.
- Functional Equivalence
  - Are they comparable (same level of activity, product, service) to base calculations on?
- Evidence – Document it:
  - Quantification Plan
  - Monitoring/Reporting Plan
  - Data Management System and Data Controls (QA/QC)
- Amount of Offset Credits/Reductions or Removals = Baseline - Project.

Need to quantify both!

Protocol/Standards

- Why?
  - Provide a set of unambiguous, verifiable requirements or specifications to support organizations and GHG project developers
  - Ensure that "a tonne of carbon is always a tonne of carbon"
  - Provide credibility to GHG quantification and enhance environmental integrity by promoting consistency and transparency in GHG quantification, monitoring, reporting and verification

Why ISO 14064-2?

- Based on an International Standard*:
  - ISO 14064 Part 2 and 3
  - Streamlined Life Cycle Assessment of all 6 gases
  - Identify the relevant GHG emissions controlled by the project
  - Also identify impacts outside the project
  - A relatively easy to use framework
  - Policy neutral, flexible
  - Remember: "what to do"

We want 'Gold Standard Credits'!

Why ISO 14064-2

- (1) based on a streamlined LCA for project and baseline conditions;
- (2) evaluate all possible baseline scenarios;
- (3) identify the relevant GHG emission Controlled by the project as well as impacts up and downstream;
- (4) decide which sources and sinks are material to quantification methodologies

Offsets Quantification

Began in the West in 2002…

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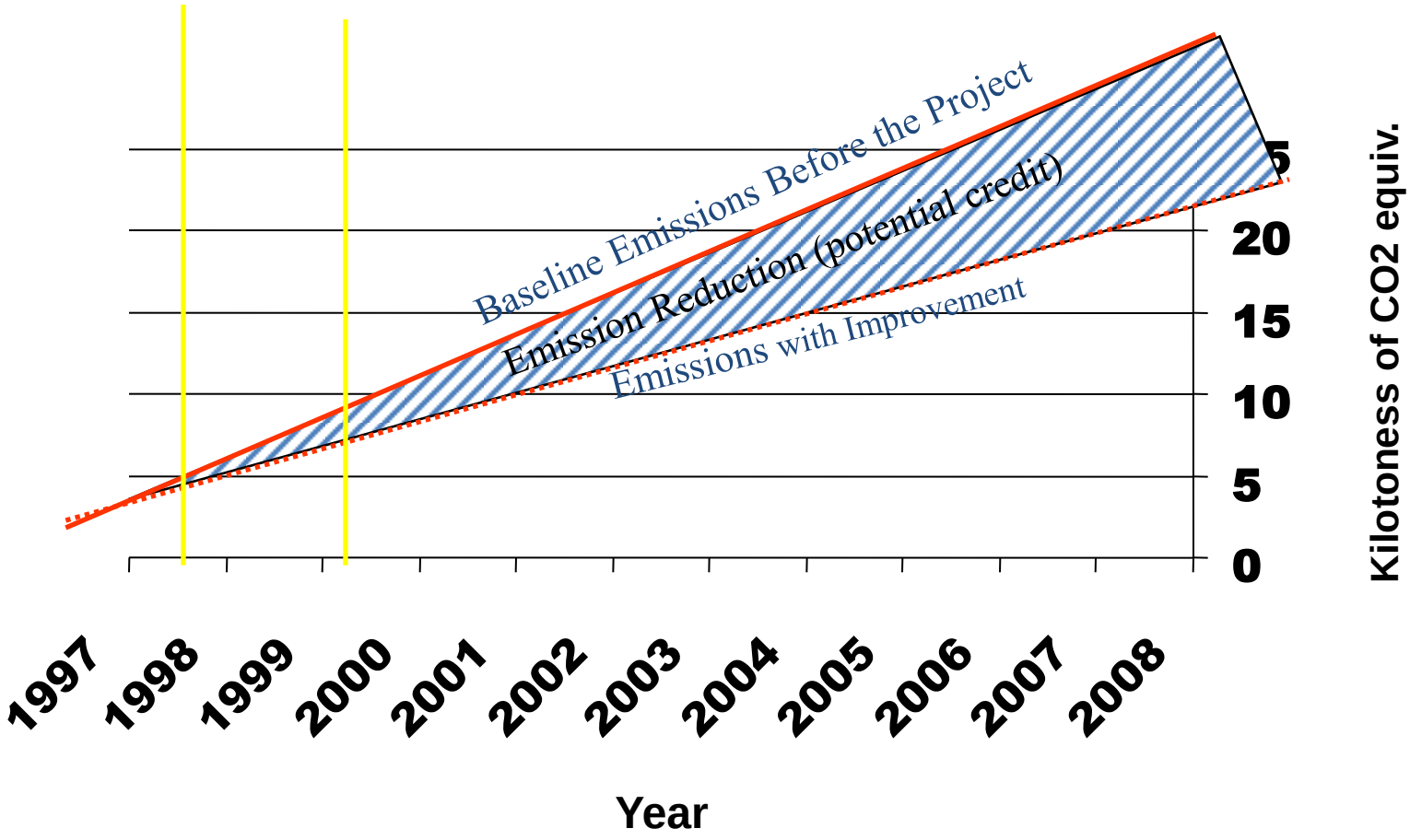
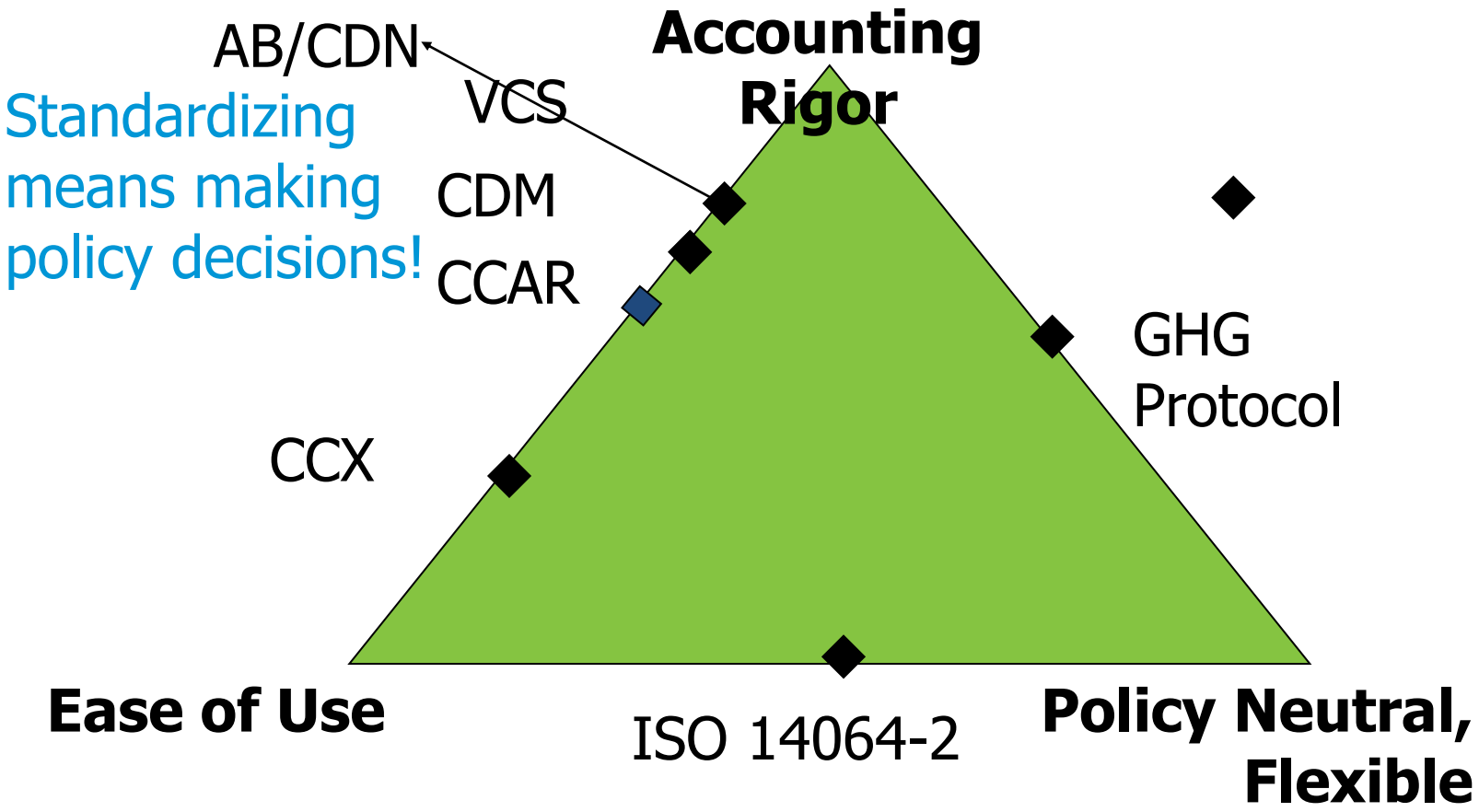
What is a Project-Based Emission Reduction Credit?



Carbon Offset (Project-based) Accounting Standards



National Offset Quantification Team

- **Western Canadian Offset Team -** 2002
- **NOQT** – 2003-2006; Fed-Prov-Territorial Committee
  - **Mandate -**Identify, and prioritise GHG Quantification Protocols to support Offset System
  - Work as of 2006: Afforestation; Biogas, Land fill Gas, Ag Soil Sequestration, Biogas, Beef, Pork, Energy Efficiency, Intermodal
  - CFS started on FCM…

C Accounting

- Project Quantification – alignment with National Inventory methods preferred
  - Inventory accounting (emission factors etc) linked to project accounting
  - Project activity level (msmts of cattle, diets, feed intake, etc) linked to inventory emission factors
  - “First Generation Protocols” – with goal of continuous improvement every 5-8 years
  - Basis to drive further refinements