

# GHG Emission Offset Protocols

Or how to turn a biological  
phenomenon into a financial  
instrument.

# Introduction

- Define offsets
- Place offsets in context of climate change
- Review implication of offsets and context for forestry
- Discuss protocol development from a developer's perspective
- Briefly discuss offset generation

# Emission Offsets

- Developed in response to climate change driven emission reduction efforts
  - Vehicle for reducing atmospheric loading of Greenhouse Gases (GHG's) through post-process capture
- Enabled by International Panel on Climate Change

# Emission Offsets

- Not very well liked by Environmental Non-government Organizations
  - Viewed as a cop-out on direct reduction

# Emission Offsets

- Emission offsets are a financial instrument facilitating transfer of greenhouse gas capture and storage between captor and emitter
  - Represent a quantity of GHG captured and stored
  - Arise from a project
  - Quantified by a protocol

# Emission Offsets

- Arise from a project
  - Specific activity or activities intended to reduce GHG emissions or remove GHG's from the atmosphere

# Emission Offsets

- Quantified by a protocol
  - Vehicle for ensuring compliance with IPCC
  - Provides standardization between like projects
  - The interface between changes in industrial behavior and the Carbon economy

# Emission Offset Protocols

- Enabled by International Panel on Climate Change
  - Clearly defined principles
    - Requirements set by IPCC
    - Standards of compliance spelled by ISO (ISO-14064)
  - Forestation rules



# Emission Offset Protocol Requirements

- Clearly defined principles
  - Relevance
  - Completeness
  - Consistency
  - Accuracy
  - Transparency
  - Conservativeness

# Emission Offset Protocol Requirements

- Other criteria that must be met include:
  - Additionality
  - Leakage
  - *Ex poste* quantification
- Alberta requirements
  - 2002 start date – AB Clean Air Strategy
  - 60 year project life

# Emission Offset Protocol Requirements

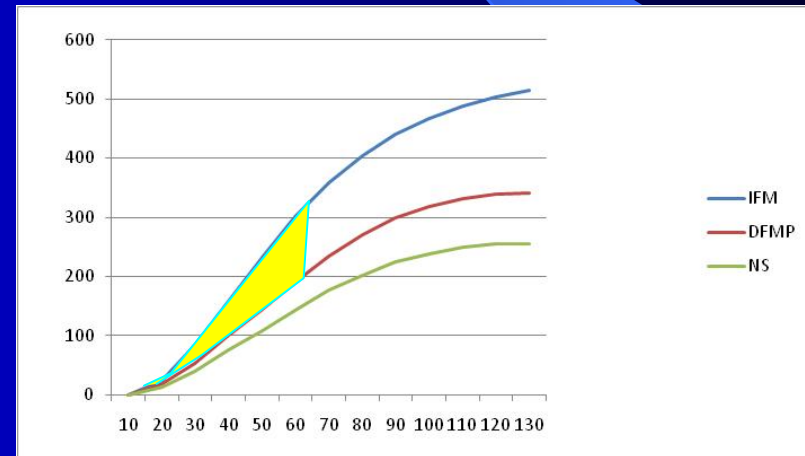
- Additionality –
  - Ensures that GHG emission offset credits arise from real changes in behavior

# Emission Offset Protocol Requirements

- Additionality –
  - A number of interpretations
    - Change must be in excess of “business as usual” (Used by AB Environment in assessing Alberta Registry Protocols)
    - Project would not go forward without economic impact of emission offsets (Preferred by many ENGO’s)

# Emission Offset Protocol Requirements

- Additionality –
  - *Forestry Context* –
    - Need to re-think strategic forest management by including GHG emission offsets as part of the forest product mix



# Emission Offset Protocol Requirements

- Leakage –
  - Ensures that off-site movement of emissions does not arise from project activities
    - E.g. switching a coal-fired plant to biomass fuel is not an offset if the coal is moved to a new location and burned there

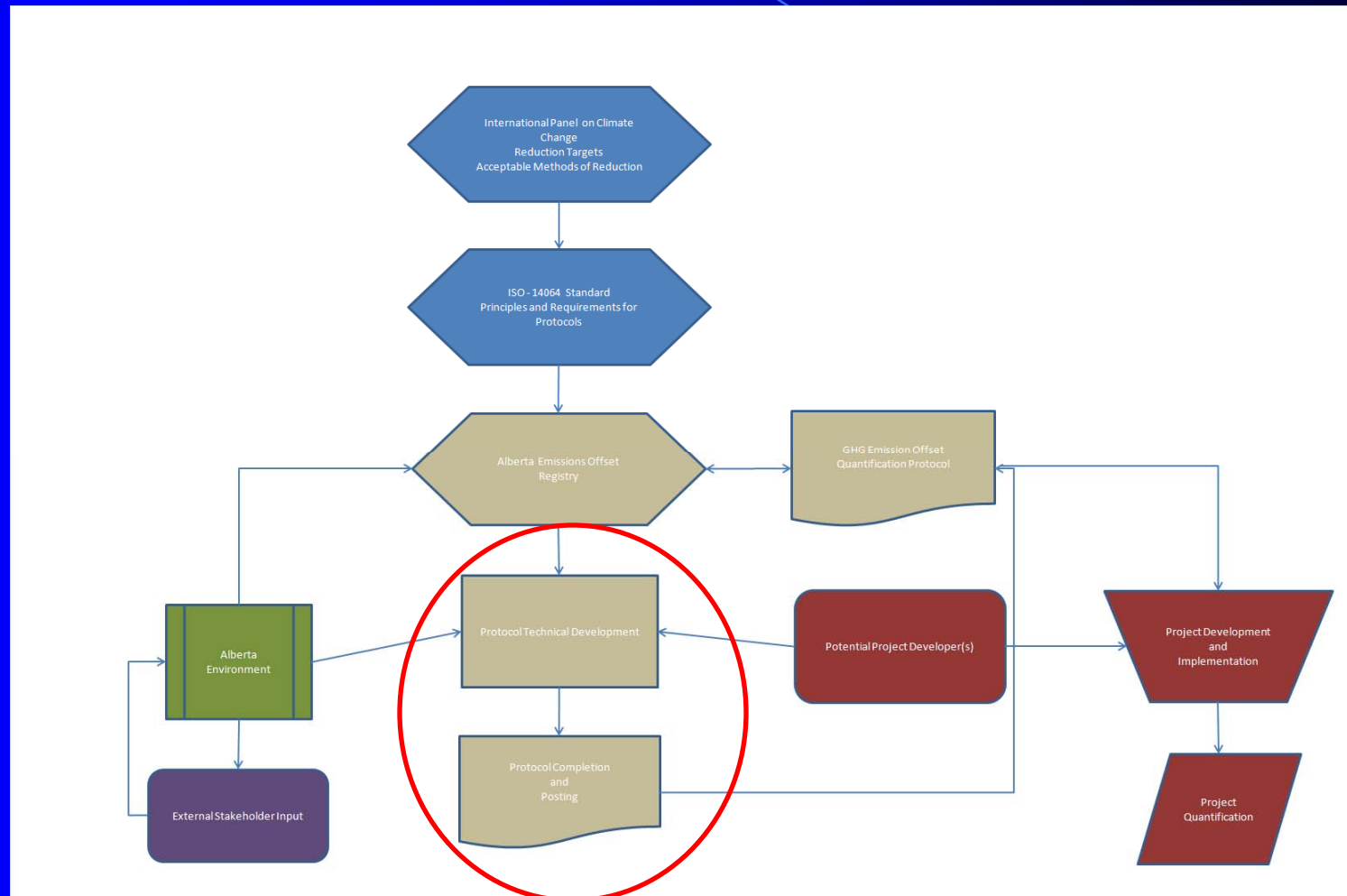
# Emission Offset Protocol Requirements

- Leakage –
  - *Forestry Context* –
    - “No net loss” of carbon requirement
    - E.g. ensure afforestation of agricultural land does not result in clearing of currently treed lands to replace cropping capacity





# Role of Protocols in GHG Offset Quantification



# Protocol Technical Development

- Follow AB Guide For Protocol Developers
  - Ensures compliance with ISO-14064/IPCC
  - Facilitates interaction with AB Environment

# Protocol Technical Development

- Follow AB Guide For Protocol Developers
  - Reasonably clear timelines to completion
  - Clarity of process
    - Structure
    - Content
    - Review

# Protocol Technical Development

- Challenges
  - Recognition of differences between current business paradigms and the carbon economy

# Protocol Technical Development

- Challenges
  - Speculative nature of some registries and/or registrants causes:
    - Skepticism on part of regulators
    - Ambition on part of some project proponents

# Generating GHG Emission Offsets

- Additionality dictates that the project should be designed with GHG emission offset creation in mind – if not front of mind
  - Not “business as usual”, i.e. mandatory buffers and structural retention are not eligible; only incremental gains above expectation are eligible

# Generating GHG Emission Offsets

- Be prepared to change process
- Integrate offsets into to your business planning
  - Product mix
  - Management planning

# Generating GHG Emission Offsets

- Have reasonable expectations:
  - Not big numbers
  - Not fast
- Understand the needs met by measurement and ensure this is done efficiently
- Document, Document, DOCUMENT!!



# Conclusions

- IPCC oversees the rules around the carbon economy
  - Compliance with intent of IPCC rules ensures value of offsets generated

# Conclusions

- Alberta has a clear process for ensuring compliance with IPCC rules, and
  - A functioning registry that provides assurance to project developers and purchasers of GHG emission offsets