

A FOUNDATION FOR THE FUTURE:

STRENGTHENING FOLLOW-UP AND MONITORING IN THE MMTP TO ENSURE ROBUST ENVIRONMENTAL PROTECTION

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1

Brian Lisson

Background

- Critical review of follow-up and monitoring;
- Overview of Adaptive Management
- Review of EPP and ISO compliance



Background EA Monitoring AM Methods Critique ISO 14001 Recommendations

2

Roberto Mangosi
Beanlands & Duinker 1983;
Ray & Green 2016

Environmental Assessment



- Proactive planning process
- Minimal regret planning
- Hypothesis framework

Background
EA
Monitoring
AM
Methods
Critique
ISO 14001
Recommendations

3

Sinclair & Doelle 2015

Best practice EA

<ul style="list-style-type: none"> ■ Legal foundation ■ Broad definition of environment ■ Best option ■ Limited discretion ■ Public involvement ■ Enforceable decisions 	<ul style="list-style-type: none"> ■ Monitoring & follow-up ■ Links to planning <p>AND</p> <ul style="list-style-type: none"> Adaptive Management Respect for Indigenous Legal Traditions Role of UNDRIP Sustainability assessment
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4

4 Principles

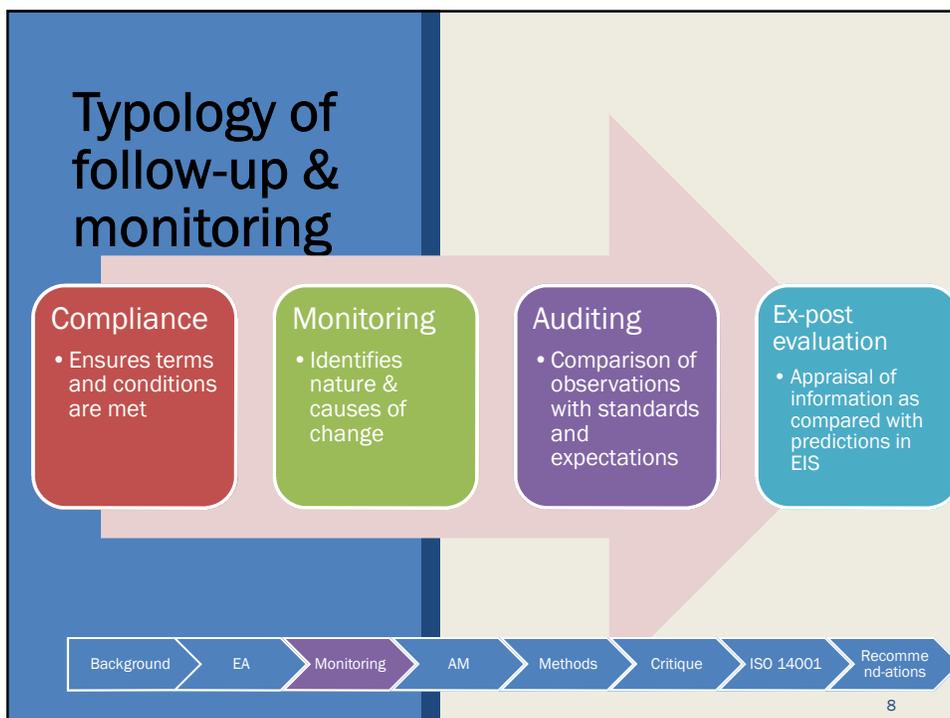
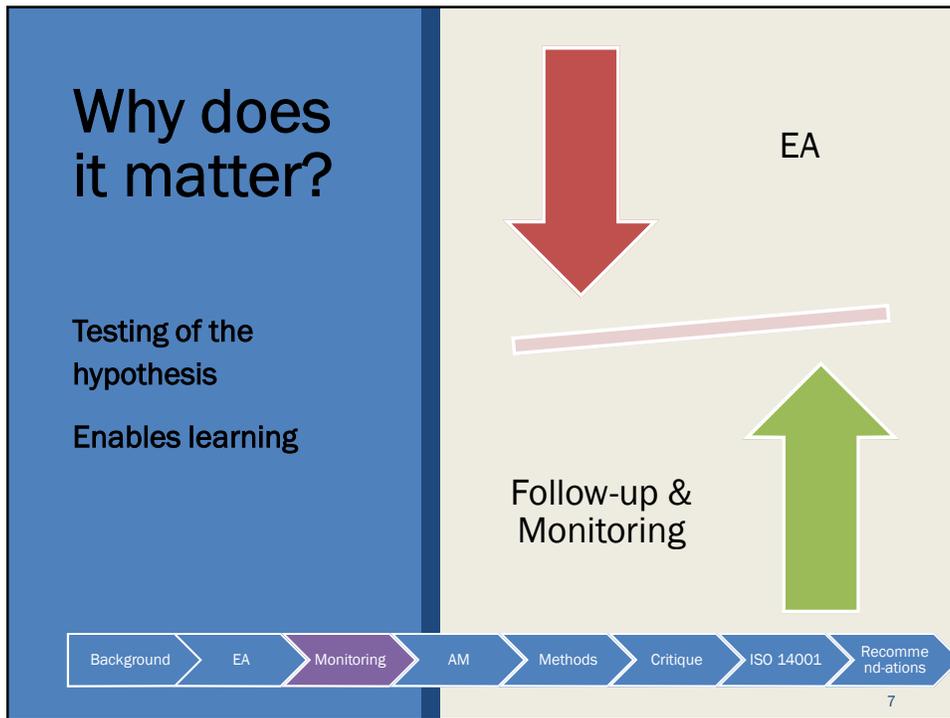
- Transparency
- Inclusivity
- Informed deliberation
- Meaningful Participation

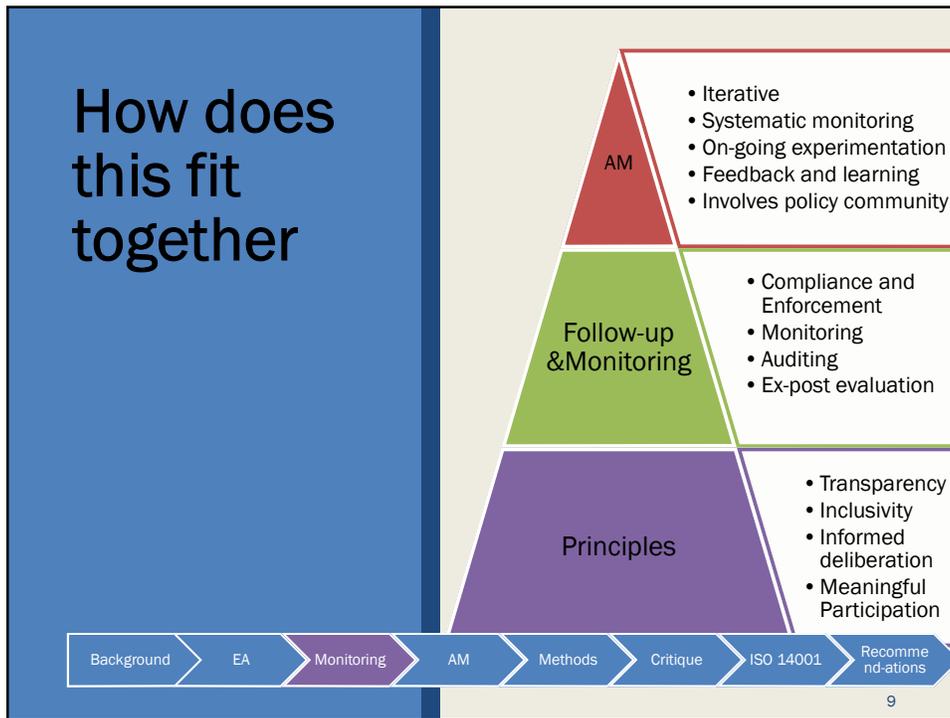


Transparency

“The openness of a process to the public. Clear procedures, structured decision making, and clear decision-making criteria assist in providing transparency.”







Baker 2004; Jalava et. al 2015

Evaluating follow-up and monitoring

- What should be included
 - *E.g., issues, methodology, tools, communication*
- How to evaluate programs
 - *E.g. implementation, outcomes, benefits*

Background → EA → Monitoring → AM → Methods → Critique → ISO 14001 → Recommendations

10

Nyberg & Taylor 1995, para 2.

Adaptive Management

systematic, “formal process for continually improving management strategies and practices by ensuring learning from the outcomes of operational programs”



Wynn as cited in Mitchell (2002)

Key Concept: Uncertainty

UNCERTAINTY	Risk: Know the odds.
	Uncertainty: Do not know the odds. May know the key parameters.
	Ignorance: Do not know what we should know. Do not even know what questions we should be posing.
	Indeterminacy: Causal chains or networks are open. Understanding not possible.



Managing Adaptively

- Reactive responses to unexpected results

VS

Adaptive Management

- Planned
- Orderly & organized
- Proactive learning, designed to capture uncertainties

13

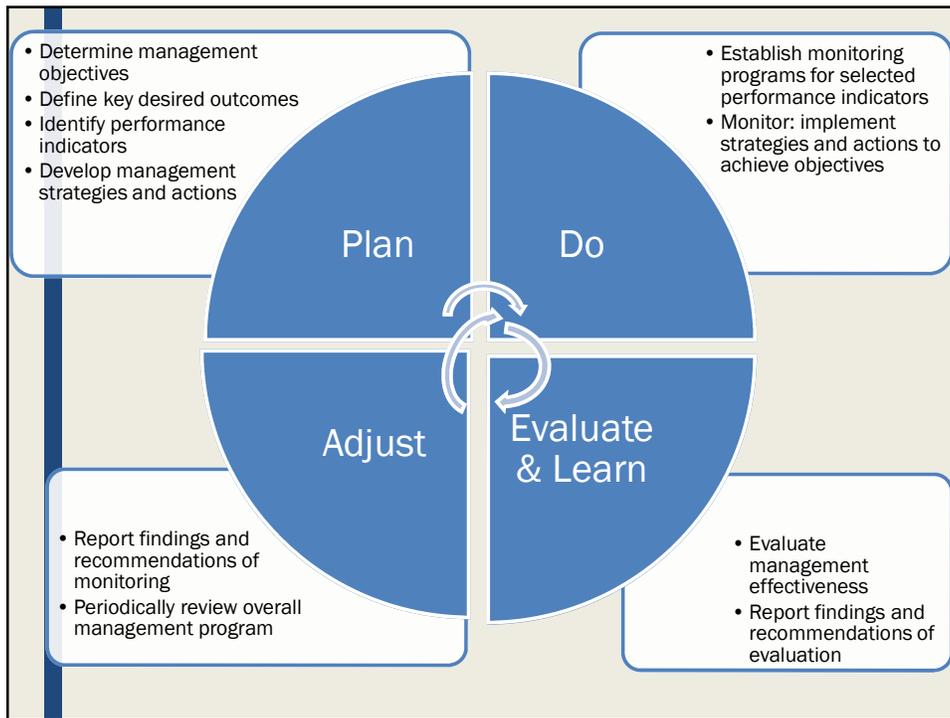
Diduck, Fitzpatrick & Robson 2012

Key Concept: Experimentation

Passive AM

Active AM

14



Diduck, Fitzpatrick & Robson 2012

General Characteristics

- Adopt a comprehensive definition of adaptive management (including uncertainty)
- Deliberate in design and implementation
- Promote learning that influences action
- Ensure transparency in decision-making
- Have requisite capacity

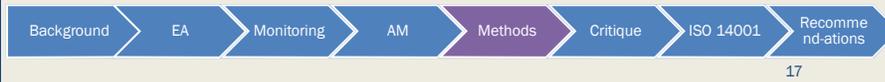
Developed into 20 questions across the Plan (7), Do (5), Evaluate (4) and Adjust (4) cycle.

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16

Material Considered

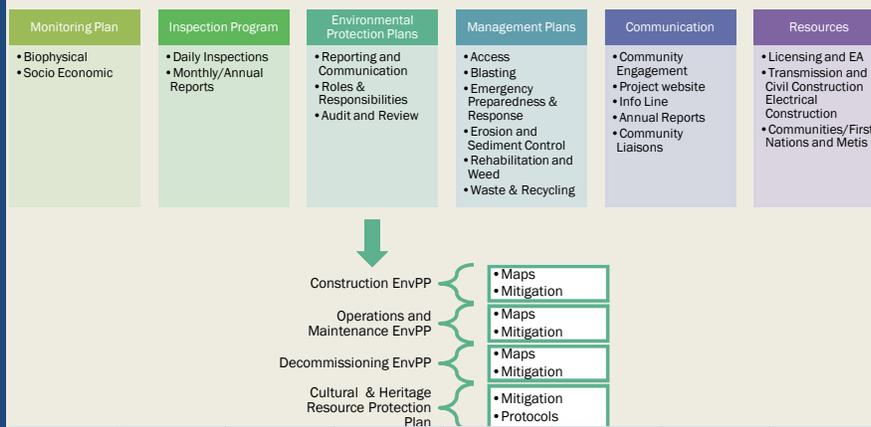
- Literature (e.g., follow-up, monitoring, adaptive management, ISO 14001)
- MMTP
- In person
- Bipole III
- Keyask
- Meeting, workshop, focus group



17

Environmental Protection Program

Environmental Protection Information Management System



18

	Document	
Monitoring	Environmental Monitoring Plan (v. 3 04/2017)	
Environmental Protection Plans	Construction (CEnvPP)	
	Operations & Maintenance EnvPP	
	Decommissioning EnvPP	
	Culture & Heritage Resource Protection Plan	
Management Plans	Access	
	Agricultural Biosecurity Transmission Standard Operating Policy	
	Annual Harvest Plan, renamed Clearing Management Plan	
	Blasting	
	Emergency Preparedness & Response	
	Erosion and Sediment Control Plans (Appendix 22A: Section 5 (e.g., p. 5-17) aka Erosion Protection and Sediment Control Plan (Appendix 22A: Section 5 (e.g., p. 5-17))	
	Hazardous Substances Management Plan	
	Rehabilitation and Weed (figure) aka Rehabilitation and Vegetation Management (Appendix 22A: Section 5 (e.g., p. 5-31) aka Rehabilitation and Invasive Species Management Remediation Plans	
	Remediation Plans	
	ROW Habitat Management Plan for Managing Critical Golden-winged Warbler Habitat during Construction and Operation	
	Site Reclamation Plans	
	Waste & Recycling Management	
	Communication Plan (Blasting)	
	Communication	Communication Plan??

Plans & Policies

<div style="background-color: #1a3d4d; color: white; padding: 5px; text-align: center; font-weight: bold; margin-bottom: 10px;">Available (Draft)</div> <ul style="list-style-type: none"> ■ Environmental Monitoring Plan ■ CEnvPP ■ Cultural & Heritage Resource Protection Plan ■ Access Management Plan ■ Agricultural Biosecurity Transmission Standard Operating Procedure ■ Rehabilitation & Invasive Species Management Rehabilitation Plans ■ ROW Habitat Management Plan for Managing Critical Golden-winged warbler 	<div style="background-color: #1a3d4d; color: white; padding: 5px; text-align: center; font-weight: bold; margin-bottom: 10px;">To be filed</div> <ul style="list-style-type: none"> ■ Operations EnvPP ■ Decommissioning EnvPP ■ Annual Harvest Plan ■ Blasting ■ Emergency Response & Preparedness ■ Erosion Protection & Sediment Control ■ Hazardous Substances Management ■ Remediation ■ Site Reclamation ■ Waste & Recycling Management ■ Communication (Blasting)
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20

Comprehensive Definition

<div style="background-color: #1a3d54; color: white; padding: 5px; text-align: center; font-weight: bold; margin-bottom: 10px;">Strength</div> <ul style="list-style-type: none"> ■ Uncertainty acknowledged (p. 35) ■ Description of AM (p. 36) <ul style="list-style-type: none"> - <i>Application in Monitoring Report</i> 	<div style="background-color: #1a3d54; color: white; padding: 5px; text-align: center; font-weight: bold; margin-bottom: 10px;">Needs Improvement</div> <ul style="list-style-type: none"> ■ Uncertainty not explicitly applied (p. 35)
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21

Promotes Learning

<div style="background-color: #1a3d54; color: white; padding: 5px; text-align: center; font-weight: bold; margin-bottom: 10px;">Strength</div> <ul style="list-style-type: none"> ■ Lessons Learned (p.37) ■ Effort by Project team to learn (p.37) ■ Changes in Monitoring Plan between versions (p.44) ■ Funded research programs (p.44) 	<div style="background-color: #1a3d54; color: white; padding: 5px; text-align: center; font-weight: bold; margin-bottom: 10px;">Needs Improvement</div> <ul style="list-style-type: none"> ■ Lack of corporate organizational learning policy (p. 38) <ul style="list-style-type: none"> - <i>Organizational memory</i>
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22

Capacity

<div style="background-color: #1a3d54; color: white; padding: 5px; text-align: center; font-weight: bold;">Strength</div> <ul style="list-style-type: none"> ■ Emerging picture of MB Hydro personnel (p.40) 	<div style="background-color: #1a3d54; color: white; padding: 5px; text-align: center; font-weight: bold;">Needs Improvement</div> <ul style="list-style-type: none"> ■ First Nations and Metis Nation role (pp.41-43, 47, etc.) ■ Budget considerations (pp. 42-43; 46, etc.)
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23

Deliberative Design

<div style="background-color: #1a3d54; color: white; padding: 5px; text-align: center; font-weight: bold;">Strength</div> <ul style="list-style-type: none"> ■ Different time frames (p. 38) ■ Purposeful experimentation (p.44) 	<div style="background-color: #1a3d54; color: white; padding: 5px; text-align: center; font-weight: bold;">Needs Improvement</div> <ul style="list-style-type: none"> ■ Integration of information in LUPs (p39-40; 47; 50) <ul style="list-style-type: none"> - Time frames for specific VCs - Additional VCs ■ Important role of government in process (p.39)
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24

Transparency

Strength

- Project websites (p.24)
- Annual reports (p. 25)
- Decision-triggers

Needs Improvement

- Interactions between MB Hydro Divisions (pp.45-46)
- Tracking table for concerns (p. 47)
- Post-EA decisions (pp.23-24)
 - *Potential Role for Independent oversight (pp. 48-49)*



25

Joint Panel Review 2007

Why Independent Oversight?

Concerns ... “about ensuring that development proceeds in a *responsible fashion*, that it *provides the benefits*, that it results in *minimum harm* and, frankly, ... *skepticism that can be entrusted to government and industry* alone to ensure it happens.... The *transparency* of the process, the ensuring that *information is readily available* so that people can confirm for themselves that things are going well is a big part of it,” (MGP Joint Panel Review, 2007, p. 9135)



26

Diduck, Fitzpatrick & Robson 2012

Effective Independent Oversight

- Strong legal foundation
- Clear mandate
- Effective communication
- Independent authority
- Independent composition
- Adequate, long-term funding
- Experience



27

Additional Aspects

- Importance of CEC Recommendations
 - *Post hoc audit* (p. 24)
 - *Project website* (p. 25)
 - *Making Monitoring publically available* (p. 26)
- Standardized Monitoring format (pp. 26-28)



28

What are voluntary, NSMD initiatives?

- Implement environmental policy outside government tools
- Many different initiatives
 - *Timeframe*
 - *Purpose & objectives*
 - *Verification*
 - *Consequences for non-adherence*



29

ISO 14001: Key aspects

- Environmental Management Plans (EMP)
 - *Planning process*
- Requires
 - *Compliance with government legislation*
 - *Continual improvement*
- **No absolute requirements** for performance
 - *Targets set by proponent*
 - *Audits to evaluate against proponent-designed EMP*



30

ISO 14001 & MMTP

- Certification at high level
 - *Not clear how MMTP fits in*
- Lack of transparency
 - *Audits not publically available*
 - *Impending overhaul to meet new requirements*
- Lack of information to understand actual environmental performance
- Does not fulfill same purpose as post-hoc evaluation



31

Conclusion & recommendations

- Marked improvement over Bipole III
 - *Clear effort to implement AM*
 - *Commitment to learning*
- Need to improve transparency
 - *First Nations and Metis Nation involvement*



32

Conclusion & recommendations

- Need to carefully consider VCs, and monitoring approach based on evidence
 - *Uncertainty*
 - *Identified by FNMEP*
 - *Involving cumulative effects*
- Recommendations by CEC could both reinforce commitments by proponent and strengthen key areas.



33

Conclusion & recommendations

1. Post hoc audit, along same timeframes as Bipole III
2. Project website maintained by proponent
3. Publically available annual reports
4. Standardized reporting format
5. Revise objectives of monitoring program
6. Indigenous Community Monitoring Committee



34

References

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35

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36