

ENSURING TRANSPARENCY THROUGHOUT DEVELOPMENT: ADAPTIVE MANAGEMENT, FOLLOW-UP AND MONITORING



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WHY DOES IT MATTER?

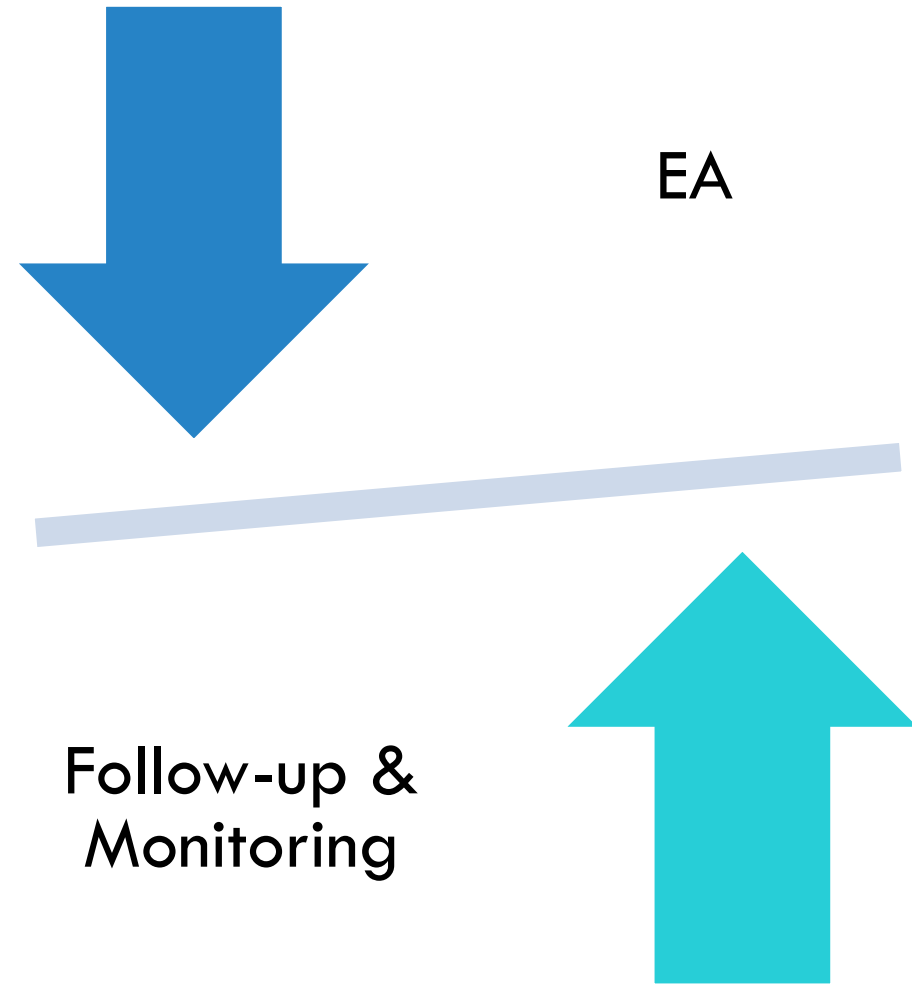
Build transparency

Make results available

Test hypothesis

To observe and act upon uncertainties

Enable learning



MISSED OPPORTUNITY: BILL C-69

(k) the requirements of the follow-up program in respect of the designated project

- “follow-up program means a program for verifying the accuracy of the impact assessment of a designated project and determining the effectiveness of any mitigation measures.”

TYOLOGY OF FOLLOW-UP & MONITORING

Compliance

- Ensures terms and conditions are met

Monitoring

- Identifies nature & causes of change

Auditing

- Comparison of observations with standards and expectations

Ex-post evaluation

- Appraisal of information as compared with predictions in EIS

ADAPTIVE MANAGEMENT

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

Nyberg, J.B., & Taylor, B. (1995). Applying adaptive management in British Columbia's forests. Paper presented at the Proceedings of the FAO/ECE/ILO International Forestry Seminar, Prince George, BC. @ para. 2

Important distinction

Managing Adaptively

Reactive responses to
unexpected results

vs

Adaptive Management

Planned

Orderly & organized

Proactive learning, designed to
capture uncertainties

EVALUATING FOLLOW-UP AND MONITORING

What should be included

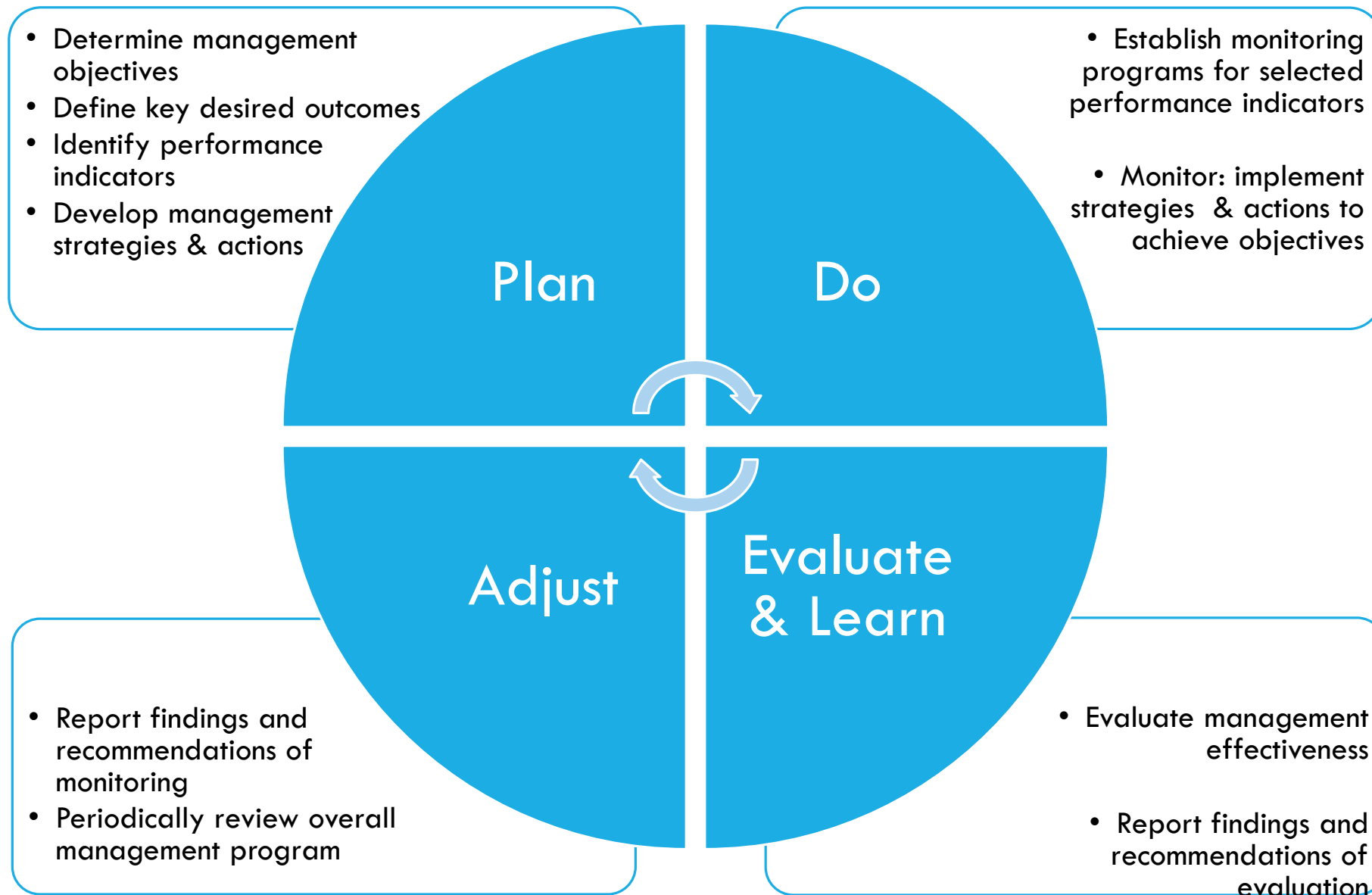
- E.g., issues, methodology, tools, communication

How to evaluate programs

- E.g., implementation, outcomes, benefits

Application of Adaptive Management

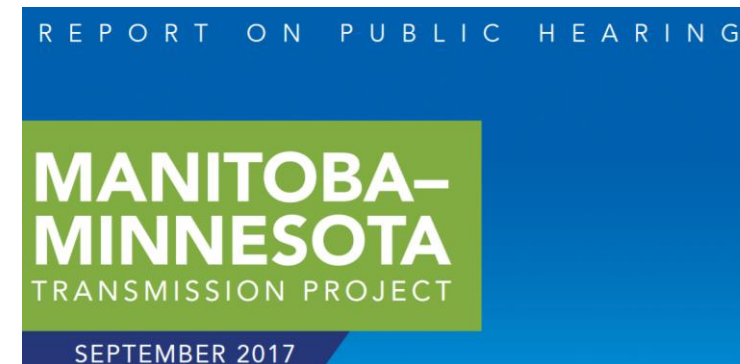
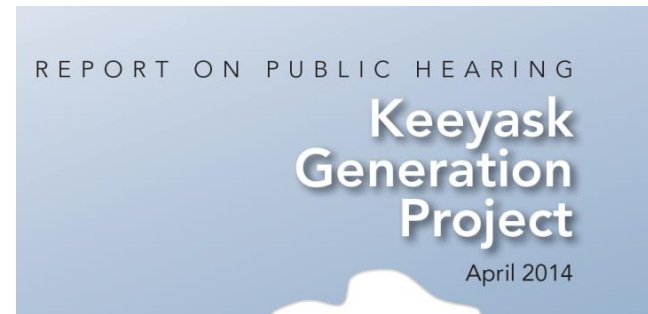
- E.g., comprehensive definition; deliberate design; learning oriented; transparent decision-making; and have requisite capacity



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

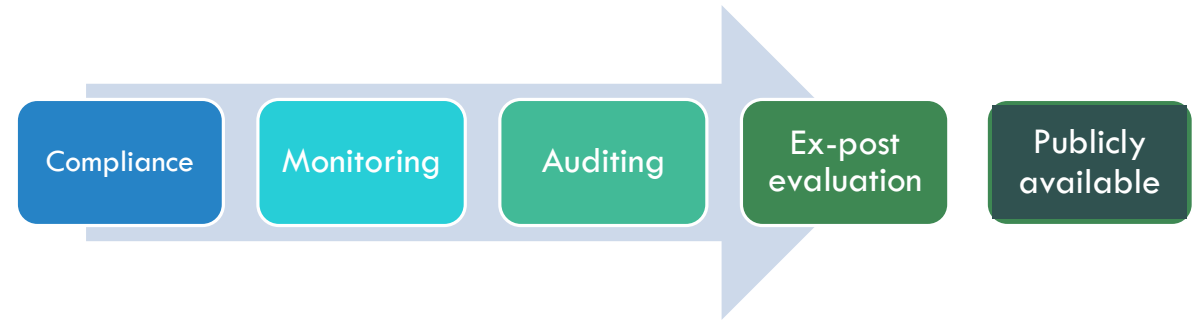
CASES

Bipole III Transmission Project	Clean Environment Commission
Keeyask Generation Project	Clean Environment Commission
Manitoba-Minnesota Transmission Line	Clean Environment Commission
Regional Cumulative Effects Assessment	Clean Environment Commission
Enbridge Line III Replacement	National Energy Board
Manitoba-Minnesota Transmission Line	National Energy Board



*Case-specific analysis available on
Research Gate*

EA DOCUMENTATION



Company Submission

BPIII	Light Blue	Light Cyan	White	White	White
Keeyask	Light Blue	Light Cyan	White	White	White
MMTP	Light Blue	Light Cyan	White	White	Dark Green
EL3RP	Dark Blue	White	White	White	White

Commission Recommendation + Company Submission

BPIII	Light Blue	Light Cyan	Light Green	Dark Green	Dark Green
Keeyask	Light Blue	Light Cyan	Light Green	Dark Green	Dark Green
MMTP	Light Blue	Light Cyan	Light Green	Light Green	Dark Green
EL3RP	Dark Blue	Light Cyan	White	White	Grey

IMPLEMENTATION: PUBLICLY AVAILABLE MONITORING REPORTS

Bipole III

	2015	2016
Biophysical monitoring and mitigation report	1	1

Updated October 2018

Keeyask

	2015-16	2016-2017	2017-2018
ATK		1	4
Aquatic effects	8	11	9
Physical effects monitoring	1	1	1
Resource use monitoring	1	1	
Socio-economic monitoring	1	1	1
Terrestrial effects	2	10	20
Zebra mussels			1

MONITORING REPORTS

https://www.hydro.mb.ca/projects/bipoleIII/document_library.shtml

Annual harvest plans	▼
Annual monitoring reports	▲
> Biophysical monitoring plans and reports	
• Biophysical Monitoring Plan (PDF, 1.3 MB)	
• 2015 Biophysical Monitoring and Mitigation Report (PDF, 3.4 MB)	
• 2014 Biophysical Monitoring and Mitigation Report (PDF, 2 MB)	
> Socio-economic monitoring plans and reports	
• Socio-economic Monitoring Plan (PDF, 2.1 MB)	
Weekly biosecurity monitoring reports	▼

Community meetings

Discussions regarding monitoring and mitigation are ongoing. Methods of engagement and summaries of information from meeting minutes with communities can be found on the [public registry](#).

Newsletters

<https://keeyask.com/the-project/environment-and-monitoring/preliminary-environmental-protection-program/environmental-monitoring-plans/>

The screenshot shows a website interface with a dark blue navigation menu on the left and a main content area on the right. The navigation menu includes categories like 'Monitoring', 'Employment', and 'Business'. The main content area is titled '2017-2018 ANNUAL REPORTS' and lists various reports under three sub-headings: 'ABORIGINAL TRADITIONAL KNOWLEDGE:', 'AQUATIC EFFECTS MONITORING:', and 'PHYSICAL ENVIRONMENT MONITORING:'. Below these, there are sections for 'SOCIO-ECONOMIC MONITORING:' and 'TERRESTRIAL EFFECTS MONITORING:'.

2017-2018 ANNUAL REPORTS

ABORIGINAL TRADITIONAL KNOWLEDGE:

- Aboriginal Traditional Knowledge Monitoring Report – TCN
- Aboriginal Traditional Knowledge Monitoring Report – WLFN
- Askiy Nanakacihetakewin Stewardship Program – YFFN
- Aboriginal Traditional Knowledge Monitoring Report – FLCN

AQUATIC EFFECTS MONITORING:

1. Adult Lake Sturgeon Movement Monitoring Report
2. Juvenile Lake Sturgeon Movement Monitoring Report
3. Lake Whitefish Movement Monitoring Report
4. Walleye Movement Monitoring Report
5. Adult Lake Sturgeon Population Monitoring Report
6. Juvenile Lake Sturgeon Population Monitoring Report
7. Water Quality Monitoring Report
8. Fish Mercury Monitoring Report
9. Benthic Macroinvertebrate Monitoring Report

PHYSICAL ENVIRONMENT MONITORING:

- Physical Environment Monitoring Report

SOCIO-ECONOMIC MONITORING:

- Socio-Economic Monitoring Report

TERRESTRIAL EFFECTS MONITORING:

1. Habitat Loss and Disturbance Monitoring Report
2. Priority Habitats Monitoring Report
3. Wetland Loss and Disturbance Monitoring Report
4. Provincially Very Rare and Rare Plants Monitoring Report
5. Invasive Plant Spread and Control Monitoring Report
6. Mercury In Plants Monitoring Report
7. Habitat Rehabilitation Implementation And Success Monitoring Report
8. Colonial Waterbird Habitat Effects Monitoring Report

CEC RECOMMENDATIONS

#.1 Manitoba Hydro... on completion of t<the project> undertake a third-party audit to assess whether predictions were met and to assess the accuracy of assumptions and predictions..

- Results made public
- Repeated

#.2 Manitoba Hydro develop and maintain... an easily accessible Project-related website to contain all of the information

- Retrievable and updated frequently

#.3 Manitoba Hydro provide...an annual report on <the project> containing sufficient detail that assessments can be made as to the accuracy of predictions, success of mitigation actions and commitment to future actions.

- Results made public

EA DOCUMENTATION — ADAPTIVE MANAGEMENT

MB HYDRO

Plan

- Improved over time
 - From managing adaptively to
 - Passive adaptive experimentation to
 - Inclusion of some active experimentation
- Difference between project type
 - Effort to learn, but learning was siloed
 - Unclear coordination between departments

Do-Evaluate & Learn- Adjust

- Need for transparency in these phases
 - Unclear human & financial allocation for subsequent stages
 - Unclear decision-making process
 - Need for clear reporting of changes
- Commitments — but lack of resourcing continues to challenge implementation
- Lack of evidence of implementation from earlier projects

IMPLICATIONS

Proponents

- Company- and department- specific approaches
- Lack of cross-sector/institutional learning
- Inadequate compliance

Boards

- Board-specific
- Recommendations may strengthen design

Participants

- Importance of cross-case evidence
- Importance for access to information

Regulators

- Missed opportunity



SUMMARY

Keeyask construction



Credit: Ryan Bullock

- Follow-up, monitoring & adaptive management are important
 - Transparency
 - Learning
 - Compliance
- Lack of legislative & regulatory direction challenging

Jill's Session:

**International progress in regional-scale
impact assessment**

Patricia's Session, co-hosted by Elder
Florence Paynter & Joëlle Pastora Sala

**Respecting different worldviews:
Opportunities & Unfinished Conversations**

Abstract deadline: October 19



THANK YOU