

Best Practices for Addressing Climate Change Risks

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Two recent activities:

April 2012

IAIA

Special Publication Series No. 8

Climate Change in Impact Assessment International Best Practice Principles

“Assessing the Treatment of Climate Change Impacts and Adaptation in Project-Level EAs in the Canadian Mining Sector,” Project for Canadian Government, 2014

Assessing the Treatment of Climate Change Impacts and Adaptation in Project-Level EAs in the Canadian Mining Sector

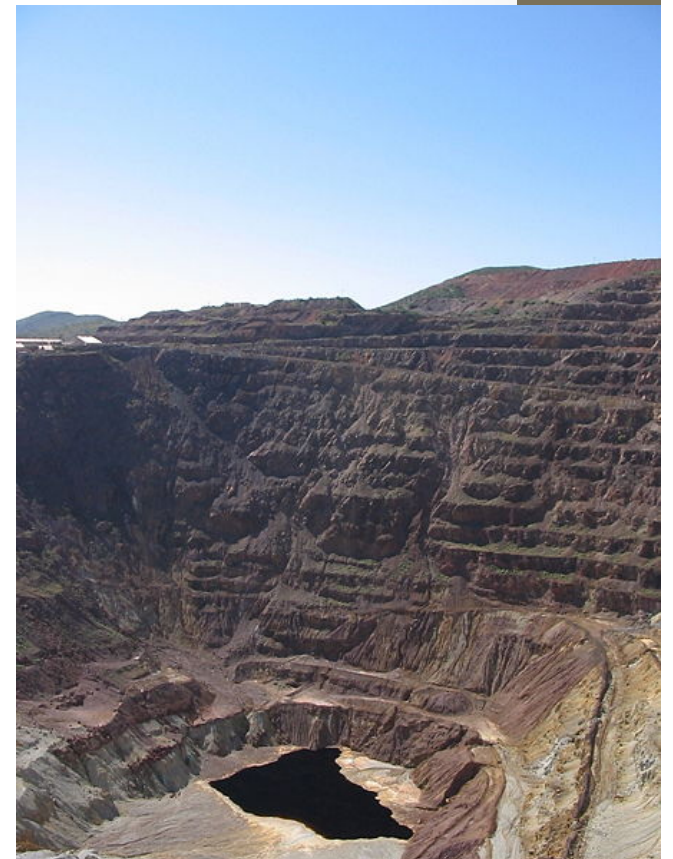
2014

OCCAR
Ontario Centre for Climate Impacts and Adaptation Resources

RSI
RISK SERVICES INTERNATIONAL

Mines and Climate Change

- **GHG emissions** from mine operations
- Impacts of mine on environment under new climate conditions
- Impacts of climate change on mine and resulting impacts on environment
- Need for each phase of mine project



Some **Key Findings** from Canadian Mine EA Project

- Climate change not explicitly addressed in most EAs
- No clearly structured process to prioritize issues
- Consultation & review processes prominent drivers for addressing climate change

When climate change was addressed:

- Little documentation on use of climate information in decision-making
- Inconsistent climate analyses within individual EAs

Key Findings cont'd:

- Adaptive & emergency management were main climate change risk reduction measures

BUT... little or no descriptions of

- Adaptive methods to be implemented or “trigger” levels for implementation
- Basis on which decisions were made about adaptive management



Best Practices developed for:

- Effects of climate change on baseline environment
- Impacts of project on the environment
- Impacts of environment on the project due to climate change (*vulnerability* of the project components) and related consequences
- Monitoring and management plan

Detailed Best Practice Steps:

Effects of climate change on baseline environment

- **Scope** VECs that could be affected
- Preliminary **vulnerability** assessment of VECs
- Redefine **baseline** conditions
- Explain and justify **methodologies**
- Describe **uncertainties** and confidence in estimates

Detailed Best Practice Steps cont'd:

Impacts of project on the environment

- **Scope** how climate change may affect impacts on VECs
- Preliminary **climate change assessment**
- Assess **impacts** relative to refined baseline
- Identify, evaluate and select **adaptation** options
- Explain and justify **methodologies**
- Describe **uncertainties** and confidence in estimates

Detailed Best Practice Steps cont'd:

Impacts of environment on the project

- **Scope** project components that may be affected
- Preliminary **vulnerability** and risk assessment
- Assess **impacts** on the project and potential consequences
- Identify, evaluate and select **adaptation** options
- Rationalize **methodologies** used: choice of models, methods, data, assumptions
- Describe **uncertainties** and confidence in estimates

Detailed Best Practice Steps cont'd:

Monitoring and management plan

- Describe measures to monitor, evaluate, manage and communicate future changes

Key Points for Best Practices:

Scoping:

- Carefully screen and prioritize issues for climate change assessments

Technical expertise and climate data:

- Use best available climate projections and climate models and their outputs for the various climate parameters
- Acknowledge and address *uncertainties* about climate change

Key Points for Best Practices cont'd:

Adaptation:

- Evaluate adaptation options and provide rationale for decisions
- Provide adaptive management plan with monitoring for climate change



Challenges for EA Practitioners:

Poor accessibility to (or lack of):

- Technical expertise in climate and climate change
- Climate data and models
- Expertise in use of climate information in decision-making

Also need:

- Detailed regulations and guidance on how to address climate change in impact assessments
 - **Effects** of climate change **on the baseline** environment
 - **Impacts** of the project **on the environment**
 - **Impacts** of the environment **on the project** due to climate change
 - **Monitoring** and management of climate change-related impacts and risks

IAIA Publications and Resources:

April 2012

IAIA

Special Publication Series No. 8

Climate Change in Impact Assessment International Best Practice Principles

http://www.iaia.org/publicdocuments/special-publications/SP8%20Climate%20Change_web.pdf



Climate Smart Decisions

http://www.iaia.org/publicdocuments/special-publications/fast-tips/Fastips_3%20Climate%20Smart%20Decisions.pdf

<http://www.iaia.org/training/webinars.aspx>



Mining Climate Change Adaptation Canadian Experience

Sean Capstick, Golder Associates

Climate Change Webinar
March 24, 2015

Organized by the
International Association of Impact Assessment



[http://www.climateontario.ca/doc/p_ECCC/
A_Review_of_Mining_Sector_Environmental_Assessments
_OCCIAR_RSI.pdf](http://www.climateontario.ca/doc/p_ECCC/A_Review_of_Mining_Sector_Environmental_Assessments_OCCIAR_RSI.pdf)

