

# Applying New IFC Standards on Climate Change Risk Analysis

Lessons from “early cases” of post-2012 ESIA’s  
aiming for IFC compliance

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ERM



# ERM



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# Environmental Resources Management - ERM

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*The world's leading provider of environmental, health and safety, risk and social consulting services*

## About ERM

- 140 offices in 39 countries
- Over 5,000 employees worldwide
- We have worked closely with over 50% of the Global Fortune 500 companies in the past five years
- Projects in more than 170 countries
- Annual Gross Revenues of US\$799m (FY12)
- Over 40 year history

# Our global reach

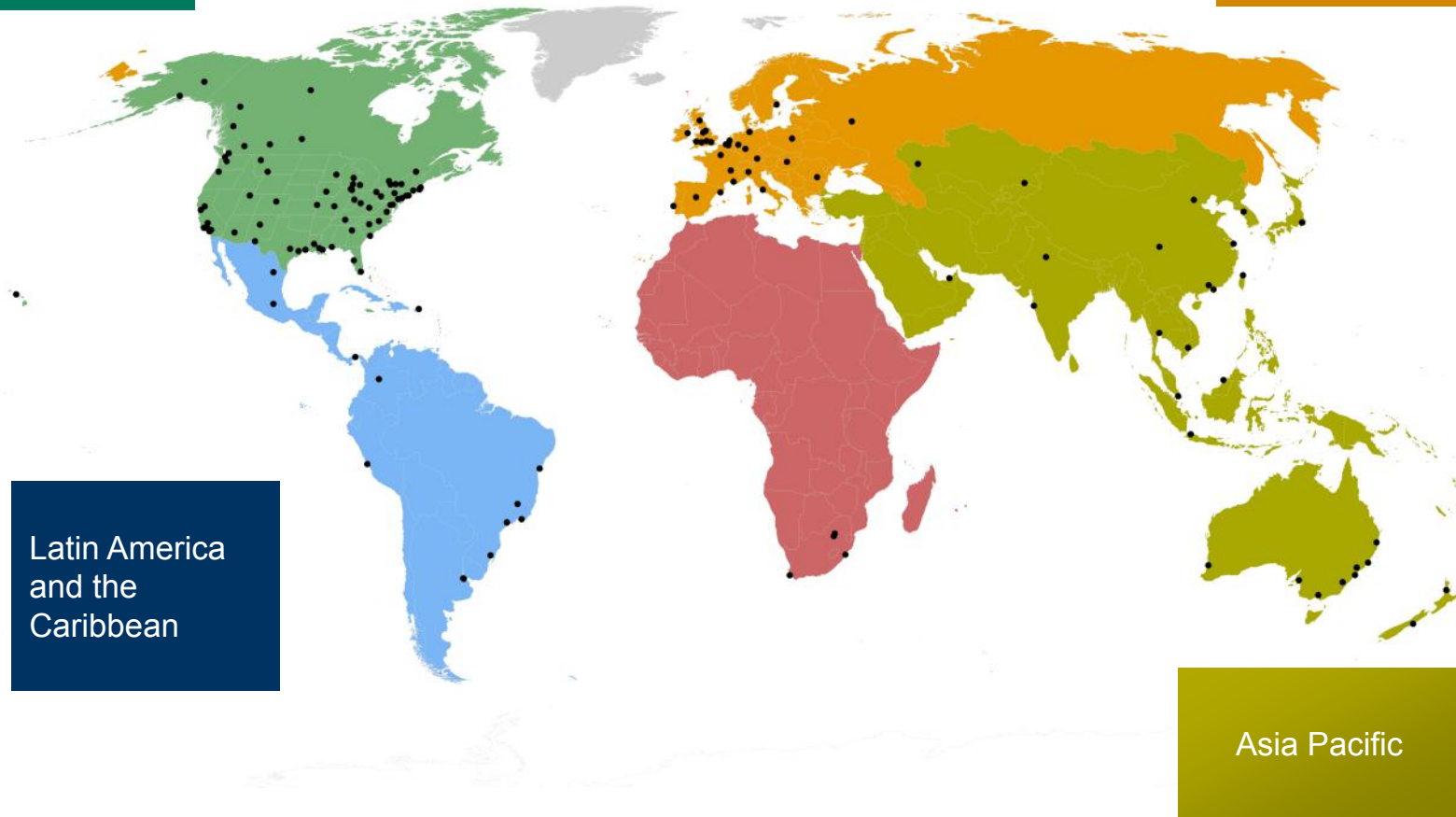
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North America

Europe, Middle East, Africa

Latin America and the Caribbean

Asia Pacific



# What does ERM do?

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- **Provides solutions** to balance environmental concerns with management, economic, technological and social needs
- Works with the **business and regulatory worlds, and local communities**
- **Delivers results** that enable our clients to **maximize earnings**, comply with regulations and **improve their corporate reputation** and public perception
- **Focuses on sustainability** and how our clients can improve their overall environmental impact



# Climate change: the problem



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# Climate Change Risk

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- Need to move from static to dynamic understanding of “project baseline”, and implications for project risks and impacts
- Climate change risks to a project, with bottom line implications:
  - Delays to construction
  - Disruption to operations
  - Asset damage
  - Impacts to associated infrastructure / transport networks (e.g. rail links and ports)
  - Disruption to energy supplies
- These changes are also altering the risk/impact profile of projects vis-à-vis communities and the natural environment

# IFC Standards



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# Key changes to IFC 2012 Performance Standards

Standard		New Requirements
1	Assessment and Management of Environmental and Social Risks and Impacts	The risks and impacts identification process will consider the emissions of greenhouse gases, <b>the relevant risks associated with a changing climate</b> and the <b>adaptation opportunities...</b>
4	Community Health, Safety, and Security	<b>Consider the effects of climate change on community risk and vulnerability</b> in identification and evaluation of project risks and impacts to community health, safety, and security, with particular attention to vulnerable groups
6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	<b>Consider the effects of climate change to ecosystem services and natural habitat, and the role of each in mitigating climate risk</b> , in identification of and evaluation of project impacts to the natural environment

# Current Practices



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# Methodology

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- Examined Category A ESIAs (19) on IFC website with disclosure dates between January 2012 and February 27, 2013
  - Looked for Climate Change reference in Environmental and Social Review Summary text
  - When CC risks mentioned in summary, reviewed full ESIA
- Compared ESIA contents against requirements from Performance Standards on climate risk and vulnerability

# IFC Database of Category A Projects

Sector	Number of Projects	Mention of Climate Change Risk/Adaptation in relation to project
Agriculture	2	1
Industrial	4	0
Infrastructure	2	0
Mining	2	1
Oil & Gas	3	0
Power	5	0
Renewables	1	0
<b>TOTAL</b>	<b>19</b>	<b>2</b>

To increase sample size, ERM consulted internally and with professional networks for other project ESIAs aiming to meet 2012 IFC Performance Standards

# ESIAs Reviewed

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- From the IFC disclosure website:
  - Port Gentil Fertilizer (Ammonia-Urea) Plant, Gabon
  - Oyu Tolgoi Copper/Gold Mine, Mongolia
- From internal or other professional sources:
  - Confidential Zinc Mine, Southern Africa
  - Confidential Bioethanol Project, South America



# What are we aiming for?

## Climate risk and vulnerability screening: applicability to project

Is the project climate-dependent?  
Is the project climate-vulnerable?

Are communities or local ecosystems climate-vulnerable?  
Could project impacts exacerbate vulnerabilities?

## Climate Change “baseline” (projected across life of project)

CC effects for project area over project lifecycle  
(CC scenario - temp, precip, extreme events)

Existing and projected CC vulnerability of communities,  
ecosystem services, and natural habitats

## Impact and risk assessment

Direct and indirect impacts / risks to project

Change in magnitude / significance of direct and  
indirect project impacts to communities,  
ecosystem services, natural habitat

## Risk mitigation / adaptation, monitoring, and adaptive management

Δ project  
design

Enhanced or new  
mitigation / offset  
measures

Monitoring and  
adaptive  
management

Capacity building /  
behavioral change  
initiatives

Disaster risk  
management

# Summary of Findings – approach and “baseline”

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- No consistent methodology in evaluating climate risks/ impacts within ESIAAs reviewed
  - Range of depth of analysis and location within ESIA document; generally poor integration with rest of study
  - “Baselines” generally refer to regional IPCC projections / qualitative trends; partial (if any) discussion of CC vulnerability of communities and ecosystems in project area
- Greater focus on slow-onset climate changes -- e.g., increasing average temp and changes to average precipitation – than on expected changes to frequency or intensity of extreme events

# Summary of Findings – Impact/risk analysis (1)

Project	CC risks/impacts to the project	CC effects on project impacts to communities	CC effects on project impacts to natural environment
<b>Southern African Mine</b>	Water shortage risk, flooding from extreme events, impacts to workforce	Impacts to surrounding communities from water stress (including food security issues) and flooding	Not discussed
<b>Oyu Tolgoi Mine (Mongolia)</b>	Water shortage risk	Increased water stress for herders; increased dust impacts to local communities	Not discussed
<b>Port Gentil Fertilizer Project (Gabon)</b>	Sea level rise – threat to project facilities	Not discussed	Not discussed
<b>South American Bioethanol Project</b>	Water shortage risk	<i>Indirect mention:</i> Effects of reduced river flows on water security and greater impacts from project discharges	<i>Indirect mention:</i> Reduced river flows - > intensified effects to biodiversity

# Summary of findings: Impact/risk analysis (2)

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- Project analysis focuses on key facilities. Limited mention of risks to supply chains; only one ESIA mentions risks to workforce or associated facilities
- Community impacts – partial analysis; stronger focus on food/water security than on safety issues and emergency mgmt
- Weak / absent treatment of implications for ecosystem services and natural habitats
- Overall general analysis – no evidence of integration into detailed technical studies (hydrology, biodiversity, etc.)



# Findings – adaptation and risk management

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- Project design changes which could reduce CC risk:
  - elevating plant site from 1.3 meters above sea level to 3.5 masl
  - diversion channels around mine pit to reduce flood risks
  - sourcing water from a farther away but more “secure” supply and building more ditches and drains for new supply
  - modifying irrigation system design for sugarcane fields
- ....however, in all of these cases, design changes are justified based on current climate variability rather than future climate change -> “no regrets” measures
- “Additional” measures are rarely identified, except to monitor / apply adaptive management
- Only one mention of climate change in context of disaster / emergency management

# Emerging good practices

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- Oyu Tolgoi: going beyond impact mitigation to build resilience for local herders
  - Commitment to ensure local herders' continued water supply, irrespective of mine
  - Participatory monitoring program to build local capacity on climate change and adaptation
  - Responds to key stakeholder feedback and fears around cumulative effect of CC and project impacts; contributes to social license to operate



# Recommendations and key remaining challenges



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# Key Recommendations

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## **Strengthening rigor and comprehensiveness of CC risk/impact analysis**

- Build capacity and understanding within organizations (IFC, project sponsors, and consulting teams) to analyze climate risk implications across technical areas of ESIA, and to develop strategies for adaptation
- Establish feedback loops for peer review and integration

## **Adaptation**

- Consider “additional” design buffers beyond what is required under current climate variability
- More attention to disaster management elements
- More focus on “green” adaptation measures - ecosystem conservation as a measure to reduce risk
- Look for opportunities to strengthen local resilience, not just mitigate impact

## ...and key remaining challenges / questions

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- Should analysis be integrated across technical sections, or stand-alone within ESIA?
  - Ring-fencing, coordination of analysis, and capacity considerations
- Is ESIA the right tool to be dealing with climate change risks and vulnerability? Where to draw the line, and ensure coordination, in roles and responsibilities for adaptation between project sponsor and government / other actors?
  - too far “downstream” in project planning to effectively influence key decisions around basic project feasibility? ESIA vs SEA roles
  - CC forecast uncertainty and short project timelines
  - Government’s role in adaptation

# Contacts

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