

IMPACT ASSESSMENT: THE WAY FORWARD

1.1 NEW WORLD RESPONSIBILITIES

1.1.1 IAIA SEA performance criteria: suitable for the next generation?

Tuesday, 14 May | 09:00-10:30 | Palomino A-C

Theme forum

Chair(s): Rob Verheem, Bobbi Schijf

IAIA Section: Strategic Environmental Assessment

The IAIA SEA Performance Criteria are now a decade old. Did they stand the test of time? Are they fit to guide the SEA work of the next generation? This session will report on the results of an online debate, as well as solicit input from the audience.

1.1.2 Influencia: A Hypothetical with a twist, a loop and a Circle

Thursday, 16 May | 09:00-10:30 | Palomino F-H

Panel discussion

Chair(s): Jack Krohn, Sandra Mols

This fast-paced, interactive session will explore the possible shape of the next generation of IA, using a form of Hypothetical structure to consider how options for change might play out over time. The audience will join the conversation through a Samoan Circle format. The key question driving the discussion will be: How can IA inform and influence decisions in an ever-changing world?

1.1.3 A vision for policy appraisal: Policy makers and scientists in dialogue

Thursday, 16 May | 09:00-10:30 | Palomino A-C

Panel discussion

Chair(s): Tamara Hochstrasser, John Fry, Tadhg O'Mahony

Is policy appraisal a way of creating reports for shelves/electronic files or is it helping to establish a dialogue between scientists and policy makers? The latter is critical for developing an evidence-based, adaptive policy making process. In this session, we will discuss theory and practice of successful policy appraisal.

Brokering knowledge in policy appraisal

Sanna-Riikka Saarela, Tarja Soderman, Irfan Khan

To act as an effective instrument policy appraisal need utilization of functioning knowledge brokering methods for science-policy interactions. This paper presents factors affecting the use of knowledge in policy appraisal.

A more social science: Scientist engagement in policy

Gerald G. Singh, Jordan Tam, Sarah Klain, Megan Mach,

Rebecca Martone, Kai M. A. Chan, Thomas Sisk

We found that different factors contribute to different forms of policy engagement, though self-perceived competence is consistently important. There is strong belief that scientists should engage in policy.

Role of national auditors in improving assessments

George Stuetz

National auditors and their audits play a critical role in supporting good governance by advancing accountability and transparency. The results of these audits provide valuable input when assessing relevant policies.

What's needed for design of adaptive policy appraisal?

Tamara Hochstrasser

A new methodological framework for adaptive policy appraisal is developed that takes into consideration the integrative, transdisciplinary, contingent and reflective nature of policy-relevant scientific knowledge creation.

1.1.4 Talking about the next generation of impact assessment

Monday, 13 May | 11:00-12:30 | Mustang

Theme forum

Chair(s): Angus Morrison-Saunders

What is the new generation of Impact Assessment (IA) people and how should they be engaged? What is the new generation of IA issues and solutions? Come and join this participative audience discussion to share your wisdom, experiences and views. The session will commence with short presentations from different generational representatives:

- Anne Miller (Baby Boomer)
- Alan Erlich (Gen X)
- Francois Retief (Gen X)
- Sandra Mols (Gen Y)

Thereafter the floor will be open for a facilitated open discussion on the topic.

1.2 EMERGING GLOBAL TRENDS

1.2.1 Harmonizing upward: The next generation EA for overlapping jurisdictions

Tuesday, 14 May | 11:00-12:30 | Mustang

Panel discussion

Chair(s): Robert Gibson

The panel will consider best means of establishing harmonized and/or cooperative multi-jurisdictional assessment regimes (e.g., for economic unions, federations, aid agencies) that serve sustainability objectives, recognize complexity and uncertainty, cover cumulative effects, address strategic and project-level

undertakings, provide sufficient flexibility to respect regional and case differences, and deliver process efficiencies.

Harmonizing upward: more advanced and more strategic

Robert Gibson, John Sinclair

Focussing on cooperative or harmonized multijurisdictional strategic level planning and assessment could help next generation EA to address big sustainability-centred issues, engage key stakeholders and deliver process efficiencies.

Reforming Environmental Law in Australia

Carolyn Cameron, Mary Colreavy

This presentation will provide an update on environmental law across Australia focussing on strategic approaches as well as lessons learnt in creating cooperative relationships among stakeholders in multijurisdictional assessment regimes.

Harmonizing Upward under CEEA 2012: Provincial Role

Meinhard Doelle

This paper considers how provinces in Canada might respond to the challenge of a much less engaged federal government in EA as a result of the recently passed CEEA 2012.

Harmonizing European IA systems towards sustainability

Maria Partidário

This paper discusses multijurisdictional assessments in Europe and how they could be more effective for moving us towards sustainability.

Harmonising donor and partner IA systems for SD

Peter Croal

This paper explores how and why impact assessment used in the development community must evolve to a new framework in order that IA can assist in poverty reduction more effectively.

1.2.2 Regional and ecosystem-based approaches in CEAM (I): Guidance and programs

Monday, 13 May | 11:00 - 12:30 | Palomino E

Theme forum

Chair(s): Larry Canter, Barry Sadler

The thematic stream will have three main objectives:

- Take stock of recent developments in CEAM theory and practice.
- Analyze key scientific, institutional and methodological challenges in applying a next generation approach to consider the reciprocal impact of global and large scale

changes and to undertake adaptive and mitigation measures.

- Review practical experience with the tools and procedures used in support of regional, ecosystem based approaches.

Cumulative effects assessment: Ireland's experience

Tadhg O'Mahony, Micheal Lehane

This paper presents the status of Ireland's CEA Guidance including examples of Best Practice to date in CEA. Recommendations to guide and inform effective CEA/SEA are also put forward.

Cumulative Effects Assessment (CEA) in British Columbia

Joe Truscott

This paper describes BC's process for developing a Cumulative Effects Assessment Framework (CEAF) and explores practicable ways to integrate the CEAF process and Project-specific EAs.

IFC good practice for CIA and anagement in emerging mar

P. Cardinale, M. Athie, L. Babra, P. Miller, J. Pooley, L. Greig, M.J. Freeman, R.R. Everitt,

This paper presents IFC's approach to CIA for private sponsors working in emerging markets, following an internal and external peer review that commenced last year at IAIA's conference in Porto.

Successful Agency CEAM Guidance: A Case Study

Robert Senner

Explicit, well-designed guidance is essential to achieve a technically and legally defensible CEAM product on time and within budget.

1.2.3 Regional and ecosystem-based approaches in CEAM (II): Methods and tools , part 1

Monday, 13 May | 14:30-16:00 | Palomino E

Paper session

Chair(s): Barry Sadler, Larry Canter

See session 1.2.2 for description.

Sharpening CEAM tools and methods

Barry Sadler, Larry Canter

This paper reviews CEAM tools, methodology, good practice, aspects of case experience and frameworks that incorporate environmental sustainability thresholds and bottom lines.

Key court cases related to CEAM within impact studies

P.E. Hudson

This paper focuses on key United States federal court cases involving the assessment of cumulative impacts within the framework of impact assessment laws and studies, including recent trends.

Scenario analysis in cumulative impact assessment

Lorne Greig

Exploring the application, challenges of and perspective of scenario analysis in cumulative impact assessments undertaken in project-based and regional CEA contexts.

Analytical frameworks for addressing CEAM in water resource planning

Larry Canter, Manroop Chawla, Tom Swor

This presentation highlights examples of frameworks which have been used in water resources planning. Both traditional and emerging frameworks are described.

1.2.4 Regional and ecosystem-based approaches in CEAM (III): Addressing CEAM at the regional level

Tuesday 14 May | 09:00-10:30 | Palomino E

Theme forum

Chair(s): Barry Sadler, Larry Canter

See session 1.2.2 for description.

Requisites for regional CEAM

Bram Noble, Robert Patrick

Regional CEAM has experienced mixed success. CEAM science and technical tools are advancing, but institutional and capacity constraints pose the most significant barriers to the implementation and success of CEAM.

Addressing VEC-Related Sustainability in CEAM

Larry Canter, Tom Swor, Lorna Harrell, Eric Hollins

CEAM often involves consideration of substantial quantities of information. Synthesis of information into easily understandable displays and discussions was performed through use of composite indicators of sustainability.

South Athabasca Oil Sands regional strategic assessment

Dallas Johnson, Judy May-McDonald

A strategic assessment is underway for the south Athabasca oil sands area to better understand the cumulative effects of oil sands activities and support the development of a subregional plan.

Taming the tempest: Regional management of Oil Sands

George Hegmann

Current and evolving regional management options for Alberta's oil sands are identified and discussed regarding approach and efficacy in addressing regional environmental issues.

1.2.5 Regional and ecosystem-based approaches in CEAM (IV): Methods and tools, part 2

Tuesday 14 May | 11:00-12:30 | Palomino E

Paper session

Chair(s): Barry Sadler, Larry Canter

See session 1.2.2 for description.

Cumulative effects assessment and species at risk

Bill Ross

I will discuss recent developments in Canadian practice of cumulative effects assessment as it relates to assessing species at risk.

CEAM for endangered species: The Sonoran pronghorn

Larry Canter, Sam Atkinson

This presentation describes how species-related scientific information and knowledge can be used in CEAM studies focused on the effects from multiple contributors on listing criteria for threatened or endangered species.

Management of CEs on fish habitat and productivity

Larry Canter, Barry Sadler

This presentation includes strategies and approaches which can be used to manage cumulative effects on freshwater fish habitat and productivity; further, collaboration for development of good practice guidance is described.

CEAM as an organizing principle for EIA documents

Robert Senner

Using CEAM as an organizing principle can improve the clarity, flow, and efficiency of environmental documents.

Watershed-Related Changes and Cumulative Effects

Larry Canter, Manroop Chawla, Tom Swor

This presentation provides examples of multiple types of watershed changes and their effects in water resources planning. The 28 case studies illustrate the use of multiple methods and technologies.

1.2.6 Regional and ecosystem-based approaches in CEAM (V): Plenary discussion

Wednesday 15 May | 09:00-12:30 | Palomino E

Theme forum

Chair(s): Barry Sadler, Larry Canter

Topics for discussion will include continuous scoping and incorporation of climate change in CEAM studies.

Cumulative effects assessment: Are we there yet?

Miles Scott-Brown

This paper offers a brief history of CEA, where it fits in EIA, its strengths and weaknesses and common methodological challenges, and its relationship to other common EIA tools.

1.2.7 Changing EIA focus and trends (I): International

Wednesday 15 May | 14:30-16:00 | Arabian C

Paper session

Chair(s): Pam Gunther

This session (Part 1) explores changes that have occurred for EIAs over time in four countries (Iran, Hong Kong (China), England, and Pakistan); the reasoning why the country has made these changes; and the successes/problems with these changes.

Evaluating the maturity of the IA system in Iran

Behzad Raissiyan

Adopting and using of a model to evaluate maturity of an impact assessment system; a new approach to assess effectiveness, address shortcomings and formulate the way towards the next generation.

Shift toward a public expectation-oriented EIA

Henry Leung, Clara U, Terence Tsang, Xiaoxin Shi

This paper presents existing EIA system in Hong Kong and to review whether they are effective enough to help public better understand on how decisions are made throughout EIA process.

25 years of the UK EIA System: A SWOT analysis

Urmila Jha-Thakur, Thomas Fischer

This paper evaluates EIA system of UK on completion of 25 years using SWOT analyses while drawing comparison with Glasson's(1999) review of the first 10 years of the UK EIA system.

EIA Implementation in Balochistan and volatile security

Mohammad Durrani, Kaleem Ullah khan

This paper is focused on various issues in the implementation of EIA regulation due to the volatile security situation in the Balochistan Province by EPA.

1.2.8 Changing EIA focus and trends (II): BC/Canada

Wednesday 15 May | 16:30-18:00 | Arabian C

Paper session

Chair(s): Pam Gunther

This session (Part II) explores creative new approaches for specific EIA components to be considered as a different approach or to evaluate their successful or unsuccessful application in recent EIAs.

Refining EIAs: Focusing on valued components

John Virgl, Lasha Young

The use of Valued Components to focus Environmental Impact Assessment will be explored in this presentation.

Including ecosystem services in environmental planning

Glenn Brown, Patrick Mooney

This project tested tools to permit the use of natural capital and ecosystem services to be incorporated in scoping and related planning processes at landscape scales in southern British Columbia

New sustainable indicators for EcoTopia society

Hideyuki Ito, Kiichiro Hayashi

This paper aims to develop a new sustainable indicator for EcoTopia society and apply it to the wooden house and steel framed house in Aichi prefecture, Japan.

Exploring the use of "argument" in impact assessment

Glenn Brown, Tim Hicks

Seven features of 33 arguments about impact significance from a government EA assessor were evaluated, revealing weak arguments that could be improved using approaches from the field of argumentation.

What's a commitment worth?

Alan Ehrlich, Chuck Hubert, Alan Ehrlich

This paper explores the evolution of the use of commitments made by proponents in environmental impact assessments conducted in the Mackenzie Valley, Canada over the past 15 years.

Assessing the legacy effects of mining

Robert Gibson, Amy V. Robinson

Better attention to lasting contributions to sustainability would help correct the tendency of non-renewable resource extraction undertakings to leave regrettable social, economic and ecological legacies for local ecologies and communities.

1.2.9 Broader thinking in impact assessment

Wednesday, 15 May | 11:00-12:30 | Quarter Horse C

Paper session

Chair(s): Charlotte Bisley

This session explores new initiatives that can enhance the value of impact assessments, for companies and/or governments.

Developing a "best practice" SIA process

Jerome Donovan, Antonio Luis Arce Gomez, Rowan Bedgood

This research seeks to establish a new SIA framework, targeted at project level implementation, to overcome the limitations associated with existing regulatory guidelines.

Coordination Mechanisms for EIA in Pakistan

Saadullah Ayaz, Azfar Hasan Ansari

Inter/intra-agency coordination is required to effectively implement the EIA process in Pakistan, that can be improved through various policy, institutional, technical and financial measures.

An environmental variable that creates competitiveness

Fernanda Fingerl, Monica Lanna, Manuela Moreira

The increase of new forms of strategic impact assessment at Vale as a mechanism to improve the value of new corporative business.

Broader SIAs in conflict/post-conflict states can create value

Charlotte Bisley

SIAs in conflict/post-conflict states present an opportunity to contribute to the nation's development. Value and risks for companies and governments are considered.

1.2.10 Can IA/SEA influence decisions affecting the global environment? (I)

Wednesday, 15 May | 14:30 - 16:00 | Quarter Horse A

Debate

Chair(s): Peter Nelson

Our world is changing—sometimes for the better; often for the worse. In session I, four experienced practitioners who are not afraid to speak their minds will argue the case for and against the effectiveness of SEA in managing our environment.

- Rob Verheem – Deputy Director, Netherlands EA Commission
- Peter Tarr – Executive Director, Southern African Institute of Environmental Assessment
- Peter Nelson – Principal, Planning Green Futures
- Peter Croal –CIDA

1.2.11 Can IA/SEA influence decisions affecting the global environment (II): Developing a plan of action

Wednesday, 15 May | 16:30 - 18:00 | Quarter Horse A

Facilitated discussion

Chair(s): Peter Nelson

Our world is changing—sometimes for the better; often for the worse. Session II will constitute a genuine debate amongst all participants, with the aim of agreeing a Plan of Action for raising the effectiveness of SEA in global decision-making.

- Does strategic assessment provide decision-makers with the information they need?
- Do decision-makers genuinely consider the advice?
- Does SEA make a difference to national and global policies, plans and programmes - or is it business as usual?

1.2.12 Local action for IA: Governance and the next generation of decision makers

Monday, 13 May | 16:30-18:00 | 100A

Paper session

Chair(s): Chumisa Thengwa

Sustainable cities are crucial to the tackling of global problems such as biodiversity loss and climate change. The projected rate of urbanisation will bring about an increase environmental impacts. To remain resilient, cities will need to act in response. Central to this local level action is the need for innovative decision

making that responds strategically to these global drivers of change. Governance and the next generation of decision makers must be alive to this reality. The aim of this session is to encourage a debate on how governance should transform in response to the realities that the next generation of decision makers will face in the impact assessment arena.

Cost Benefit Analysis Of Municipal Adaptation Plans

Chumisa Thengwa

[need summary statement](#)

Urban heat stress: Origins and strategies

Julie Donner, Johann Köppel

This paper examines a new methodological approach to identify the driving forces and barriers for adaptation strategies to reduce the hazard or the vulnerability of cities for urban heat stress.

Achieving sustainable urbanization: the case of airports

Xiangyu Sheng, David Carruthers, Peter Guthrie

This paper uses some case studies which have been carried out in the UK to form a framework for assessing emissions from airports and associated impacts on air quality.

1.2.13 Orphans re-generating impact assessment

Monday, 13 May | 16:30-18:00 | Palomino D

Panel

Chair(s): Jos Arts, Francois Retief

This session is a follow-up on previous years' sessions about re-introducing and re-emphasizing key issues in impact assessment which seem to have been neglected over time. Can we re-generate these orphans of impact assessment so we ensure that the profession strengthens its roots towards improved practice for the next generation?

Orphans re-generating impact assessment: An introduction

Chair(s): Francois Retief, Jos Arts

This paper discusses key issues in IA neglected over time. Can we re-generate these IA-orphans to ensure that the profession strengthens its roots towards improved practice for the next generation?

Overview of sessions in IAIA'13 orphanage

Scoping: are we getting it right?

Jeff Barnes, Denis Marquis

To be or not to be? Alternatives analysis in impact assessment (I & II)

Charlotte Bingham, Patience Whitten, Emily Johannes, Bryony Walmsley, Inga Carlman, Sanjay Srivastava

Significance: How and why is it determined?

Jeff Barnes, Gordon Yamazaki

It's all in the mix: The lost art of integration

Bryony Walmsley, Peter Tarr, James Baines

Next generation IA: tiering of IA and planning

Heikki Kalle, Jos Arts

Following up IA follow-up: The next generation?

Jos Arts, Angus Morrison-Saunders

Paper presentations

Reinventing screening: SEA screening in Sweden

Charlotta Faith-Ell, Marie-Louise Stenérus, Susanna Nilsson

The paper builds on a study of the practice of screening within Swedish municipalities and County Administrative Board.

Thresholds (an orphan on the doorstep?)

Jack Krohn

Embedded in several key elements of EIA, thresholds are often taken for granted. How can we ensure they are relevant, appropriate, responsive to needs, contributing to healthy processes?

Non-technical summaries: Importance, pitfalls and challenge for practitioners

Jan Nuesink

General discussion

1.2.14 The use of a system approach to improve impact assessment effectiveness

Wednesday, 15 May | 09:00-10:30 | Mustang

Theme forum

Chair(s): Bobbi Schijf, Dieudonné Bitondo, Gunnar Baldwin

Effective IA is the outcome of an interlocking system where various actors and functions play a role. System thinking can help to more effectively identify the bottlenecks for IA, particularly to bring into view partners outside the direct IA community, that we should collaborate with. The NCEA, SEEAC and INECE share their views.

- **Rob Verheem, NCEA.** The system approach to EIA and SEA developed by the Netherlands Commission for Environmental Assessment.
- **Dieudonne Bitondo, SEAAC.** Insights that have emerged from the application of system analysis (EIA mapping) in 5 central African countries. What added value did the system approach have? One of the bottlenecks that was identified in this analysis was the lack of structural financing for EIA related governmental tasks, including

compliance monitoring and enforcement.

- **Gunnar Baldwin, INECE.** Results from a study that emerged from the system analysis and was just concluded: financing mechanisms for IA. Gunnar will discuss what alliances are needed with partners outside the IA community in order to institutionalize funding mechanisms.

Following these presentations, the audience will be asked to respond to the pros and cons of approaching EIA and SEA as systems, including what it would mean to how we organize ourselves within IAIA (for example, in enabling cooperation and exchanges across specializations). The IAIA Sections are specifically invited to react.

AGRICULTURE, FORESTRY AND FISHERIES

2.1 The expanded FAO definition of agriculture and its relevance to ESIA

Tuesday, 14 May | 09:00-10:30 | Arabian B

Theme forum

Chair(s): Patrick Duffy

IAIA Section: AFF

It is time to reboot the IAIA activity in agriculture to acknowledge the expanded FAO definition of agriculture to include forestry, fisheries/aquaculture, livestock, water management, land use/ biodiversity, fertilizers, and pesticides. These sub-themes bring enormous impacts and ESIA can help to meet the challenges. Open discussion.

2.2 EIA and food security

Tuesday 14 May | 16:30-18:00 | Arabian A

Paper session

Chair(s): Patrick Duffy

[Session description ...](#)

Sustainable development in fisheries of Nigeria

Ijeoma Vincent-Akpu, Gordian Obute

The paper examines the present role of fisheries in food security in Nigeria and consideration of existing strategic visions and different policies issued in sustainable fisheries development and management.

EIA: A Tool for Global Food Security?

Jeannette Tramhel

The potential role of EIA towards achieving global food security is developed with examples from Canada's new EIA legislation and recent jurisprudence in international environmental law.

A NEW GENERATION OF IA PRACTITIONERS

3.1 IA young practitioners forum: Passing the torch

Tuesday 14 May | 11:00-12:30 | Palomino A-C

Panel

Chair(s): John Boyle, Michael Quinn, Brian Sevick

This session will bring together leading and early IA practitioners. The panel will start a discussion with their experiences with growing as an IA Practitioner, and what they see as the opportunities, barriers and communication challenges the IA community must address to support passing the torch to the next generation of practitioners. Fundamental questions about how to build capacity, nurture leadership, mentor and train young professionals will be explored. We invite and encourage young practitioners to share their experiences and expectations. Identifying critical strategies for supporting young practitioners will be the desired outcome of the session. Finding approaches and resources to enhance and sustain the IAIA Students and Early Professionals Section will also be a priority.

DIGITAL AND SOCIAL MEDIA IN IA

4.1 Equal Access to Information and the Role of EA Registries

Thursday, 16 May | 09:00-10:30 | Quarter Horse C

Paper session

Chair(s): Lisa Odparlik

Participation needs information. International practice examples have shown an increasing use of Web-based EA registries or project Web sites to provide this information. But what constitutes good practice? This session aims to facilitate discussion on the requirements and systems to provide information for the effective participation in the EA process and thereby take the more general discussion of the role of social media in EA to the next level as well.

Equal access to information: Role of EA registries

Lisa Odparlik

This paper examines the issue of access to information by comparing selected EA registries and web sites providing information within the project based and strategic environmental assessment framework.

Developing an EIA database

Hammad Saeed, Arfa Zaheer

The system contains past Environmental Impact Assessment (EIA) reports and project details. After the deployment of this system, the entire performance management can be tracked electronically.

EFFECTIVENESS AND EFFICIENCY IN IA

5.1 Impact Assessment Innovation

Wednesday, 15 May | 11:00-12:30 | Arabian B

Pecha Kucha

Chair(s): Jenifer Hill

Impact assessment is evolving. We will see 10 fascinating Pecha Kucha presentations highlighting ways that consultants, industry, organizations and government are taking project and strategic level impact assessment into the future. The presenters identify some of the issues and gaps and detail options for standardization, integration, and emerging methods.

Quick Tour of a Major EIA/SIA in Armenia

David Burack, Sos Amirkhanyan

Twenty slides covering the major issues that recur in project-specific EIA, using as an example the Millennium Challenge Corporation's major irrigation and rural roads project in Armenia. Pointers for success.

Importance of labor monitoring in SIA mitigation

Marielle Rowan

Construction labour monitoring should be considered as an SIA mitigation measure or contractual condition when labour risks exist. Project examples validate its use to create positive labour management outcomes.

Multiple EIAs and Management for a Strategic Rail Link

Josh Lam, Lisa Poon

As we build on the existing rail network, the challenge is to overcome complexities by risk management during the EIA process and effective follow-up management during the construction stage.

EIA Smack Down: Comparing California and EU Approaches

Richard Grassetti, Ralf Aschemann

This paper will compare the evolution and effectiveness of two EIA processes, the California Environmental Quality Act and the EU EIA Process to identify solutions to common EIA problems.

Cumulative Constraints-based Planning for Oil Sands

Oliver Laser, Amit Saxena

This paper describes a cumulative constraints planning process that was developed to manage potential environmental impacts of oil sands projects in the Fort McMurray area of Alberta. Impact analysis methods for offshore E&P activities

Developing practices for supporting EIA with MCDA

Ricardo Alves de Souza

Environmental network diagrams and clear analysis criteria are developed for the main

offshore E&P activities so as the potential impacts can be previously and properly identified and predicted.

Developing practices for supporting EIA with MCDA

Jyri Mustajoki, Mika Marttunen, Timo P. Karjalainen, Joonas Hokkanen

We discuss application opportunities of the principles and tools of MCDA and identify good practices for applying MCDA in EIA. We present a framework for computer-aided MCDA supported EIA process.

SEA Implementation Mechanisms and Future Tools

Anthony Ho

The paper discusses Hong Kong's SEA system, summarizes the application of KM concept and ICT in processing SEA studies, and projects how future SEAs may be carried out.

Sustainability Assessments: New Regulatory Governance

Bronwyn Purvis, Olan Howell

Exploring the role of on-going innovation in Impact Assessment, in establishing new "soft" regulatory governance for companies, using case-studies from the field of emerging Sustainability Assessments.

5.2 Scoping: Are we getting it right? (I)

Tuesday, 14 May | 11:00-12:30 | Arabian B

Paper Session

Chair(s): Jeffrey L. Barnes

This session explores scoping practices and related issues that can arise or be avoided through scoping. Is less-than-good scoping a cause for inefficient and ineffective EIA?

An online EIA screening and scoping system

Dick van Straaten, Katia Nagels

An online EIA screening and scoping system is an efficient instrument to focus the EIA to the remaining issues that needs further and more profound assessment.

ERA: Methodological Framework for Focused EA

Geoffrey Hurley, Jeffrey L. Barnes

This paper outlines a methodological approach to focused environmental assessment that the authors term environmental risk assessment (ERA).

Improving effectiveness of EIA by a MCDA approach

Timo P. Karjalainen, Jenni Neste, Mika Marttunen, Jyri Mustajoki, Olli-Matti Tervaniemi

A new decision analytic and interactive EIA framework stresses the scoping phase ensuring that the most significant impacts of the project are included in the assessment.

VEC Selection for CEA: Beyond

Concurrent sessions

Residual Impact Analysis

Ayodele Olagunju, Jill Gunn

Residual effects analysis alone is insufficient for determining appropriate VECs for cumulative effects assessment.

Scoping in developing IA legal frameworks

Javier Clausen, Sergio Contreras

Challenges and initial outcomes of proactively implementing scoping for EIA and CEA in the developing IA regulatory framework in Mexico.

5.3 Scoping: Are we getting it right? (II)

Tuesday, 14 May | 14:30-16:00 | Arabian B

Paper Session

Chair(s): Jeffrey L. Barnes

This session explores scoping practices and related issues that can arise or be avoided through scoping. Is less-than-good scoping a cause for inefficient and ineffective EIA?

Scoping under New Federal EA Regime in Canada

Jeffrey Barnes, Neil Cory, Mary Murdoch, Sandra Webster,

This paper explores the practices of government under the new federal EA legislation in Canada and identifies some administrative issues that may tend to undermine the achievement of good scoping.

EA Report Quality in Canada: Issues and Suggestions

Steve Bonnell, Todd Burlingame

Explores a number of procedural and methodological issues that are affecting EA practice in Canada, and identifies measures to help improve the content, quality and brevity of future assessments.

Scoping meeting of revised EIA Law in Japan

Yuki Shibata, Yumie Hoi

We conducted a questionnaire survey to find out the actual conditions of scoping meetings under the newly-revised EIA Law in Japan (2011), and suggest some needs for further improvements.

IFC vs local standards - lessons learned from frontier

Caleb Wall, Dirk Nuyens, Ross Mitchell, Wendy Brown, Robert Mugo

Delivering safe and environmentally friendly operations are non-negotiable, it requires dedicated strategies and project teams so that compliant EIA projects can be delivered in complex conditions.

A pathway for future development and empirical examination

Jerome Donovan, Ego Onwuka

This paper explores the scoping stage within integrated impact assessments, developing a conceptual basis from extant literature on how to more effectively and efficiently undertake this stage when considering economic factors.

Criteria for Effective EA: A Delphi Study

Kevin Hanna, Bram Noble

Using a Delphi study, this research developed effectiveness criteria that can be used to better understand and evaluate the impact of EA on environmental quality and decision-making.

Citizen science: New ways for HIA

Lea den Broeder

A change of paradigm from exclusive, expert based science to citizen science will provide new ways for HIA.

Public Scoping: The meaningful beginning of EHIA

Khemwalai Theerasuwanajak

There are many criticisms on the public scoping part of EHIA about the real participation process. The solution of these is the challenge of all related organizations in Thailand.

5.4 Significance: How and why is it determined?

Tuesday, 14 May | 16:30-18:00 | Arabian B

Paper Session

Chair(s): Jeffrey L. Barnes

This session will explore current practice for the determination of significance and the various approaches used in its determination. It will also consider legislative and policy issues around the concept of significance, including the intention and utility of its determination.

Was there an impact?

Robert Gerst

Practitioners use statistical techniques like significance testing to help reach conclusions concerning policy or program impact. The problem, statistical significance can't do that. A move to material significance is required.

Relying on Law and Regulation to Establish Significance

Jeffrey Barnes, Gordon Yamazaki, Denis Marquis,

This paper explores the elegance, benefits and perils of relying upon law and regulation for the determination of significance in EIA.

Deliberative approach to impact significance assessment

Mika Marttunen, Timo Karjalainen, Jyri Mustajoki, Anne Vehmas

A systematic approach to determine significance of the impacts taking into account both experts' judgments and stakeholders' perspectives enhances interaction and learning and results in transparent outcomes.

Considering Uncertainty and Risk in Significance

Celesa Horvath

This paper will examine the need for, and approaches to, considering risk and uncertainty in the determination of significance. These factors are critical determinants in scoping follow-up and monitoring.

EIA-screening reform for Europe

Martin Lund-Iversen, Davide Geneletti, Silvia Mete

Significance determination in EIA-screening is being improved by the European commission and by member states by linking it to environmental regulations or designated statuses.

5.5 To be or not to be? Alternatives analysis in impact assessment (I)

Tuesday, 14 May | 14:30-16:00 | Arabian C

Paper session

Chair(s): Charlotte Bingham

This session explores the status and state of alternatives analysis in Impact Assessment. Once considered the "heart" of impact assessment, this session examines how the evaluations of alternatives are now used or abused and their effectiveness in determining sustainable development options.

Alternative analysis: Key to effective & efficient IAs?

Shirley Sau Ling Lee Hon

Quality alternative analysis will improve credibility of future IA findings, facilitate better decision makings and wider public acceptance of recommended options to achieve more sustainable patterns of developments and redevelopments.

Where did requirements for alternatives in EIA go?

Inga Carlman, Erik Grönlund, Anna Longueville

The requirement for alternatives to the proposed action, which was once the linchpin of the EIA, is now almost lost. What consequences will that have for future generation?

How to misuse the EIA tool: A Swedish example

Anna Longueville, Inga Carlman

Alternatives are the backbone of EIA. Examples from Sweden show that the original intentions of an EIA are not met, and explain why this is the case.

What is the Future for Alternatives Evaluation?

Charlotte Bingham

If alternatives are the heart of EIA, why are they so often written as an afterthought, when everybody already knows the preferred or chosen project. Can alternatives evaluation be revived?

5.6 To be or not to be? Alternatives analysis in impact assessment (II)

Tuesday, 14 May | 16:30-18:00 | Arabian C

Panel discussion

Chair(s): Patience Whitten

Though it is the backbone of environmental impact assessment, the evaluation of alternatives in EIA practice is arguably suffering from willful neglect, even within the EIA society. This panel will challenge the complacency surrounding the use of alternatives, examine the problem and address solutions.

- Patience Whitten, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Washington, DC, USA
- Inga Carlman, Dept. of Engineering and Sustainable Development, Mid Sweden University, Östersund, Sweden
- Bryony Walmsley, Southern African Institute for Environmental Assessment, Cape Town, South Africa
- Emily Johannes, Senior Associate Vela Environmental, Washington, DC, USA
- Charlotte Bingham, Environmental Impact Assessment and Resettlement Specialist Independent Consultant, USA

5.7 Streamlining EIAs and the approval process: How far do we go? (I)

Monday, 13 May | 14:30-16:00 | Palomino A-C

Paper session

Chair(s): James Howell, Nigel Fisher

This session will review the effects of international changes to EIA requirements. Do these changes maintain EIA integrity? Are they the vanguard of a new approach to environmental impact assessment?

It's not the End of EA in Canada!

Jeffrey Barnes, George Hegmann

The assertions of critics that new federal EA law in Canada marks the end of EA in Canada is contested, countering that this rhetoric ignores improvements and denies previous problems.

Environmental Assessment in Alberta

James Howell

Alberta's environmental regulatory processes are being streamlined to minimize duplication while maintaining rigour in assessing project environmental effects. The current state of environmental assessment in Alberta will be presented.

Streamlining EIA Procedure for Power Plant Replacement

Daisuke Uesako, Tetsuro Uesugi, Kenji Kamita

Several measures are taken in Japan to streamline legally required EIA process for projects replacing aged thermal power plants. Here, we introduce how we developed this, and how it works.

EA and economic crisis: Opportunity for change in Spain

Iñigo M. Sobrini, Miguel Angel Casermeiro, Luis Desdentado, Manuel Diaz, Ana Pilar Esplugas

Spanish Government is boosting new EIA regulations, to improve national EIA system, without jeopardizing the actual environmental protection standards, Spanish EIA Association having been consulted.

Canada's federal EA legislation vs. a model EA law

Brenda Heelan Powell

This paper will provide a comparison of a Model Environmental and Sustainability Law developed by the Environmental Law Centre (Alberta) with the previous CEAA, 1992 and the current CEAA, 2012.

5.8 Streamlining EIAs and the Approval Process - How far do we go? (I)

Monday, 13 May | 16:30-18:00 | Palomino A-C

Paper session

Chair(s): James Howell, Nigel Fisher

This session will review the effects of international changes to EIA requirements. Do these changes maintain EIA integrity? Are they the vanguard of a new approach to environmental impact assessment?

EA in Canada: Out of the Frying Pan, into the Fire

Celesa Horvath, Jeffrey L. Barnes

This paper will examine challenges for process efficiency and coordination created by the new Canadian federal EA legislation, and make recommendations for legislative amendments and/or procedural guidance to address them.

Canadian fisheries legislative changes and impact to IA

Nigel Fisher

This paper reviews the implication of changes to fisheries management legislation in Canada and the implication for IA practice for fisheries and aquatic biota.

Reducing green tape or rolling back IA in Australia

Garry Middle, Lex Brown, Daniel Franks, Ben Cave, Beverley Clarke, Nermin Baykan, Angus Morrison-Saunders

EIA globally and in Australia is being challenge because of perceptions about timeliness and preventing economic growth. This paper critically examines proposed and possible "efficiency" changes to EIA in Australia.

Streamlined IA of Ethanol Projects in Brazil

Alberto Fonseca, Juliana Silva, José Francisco Prado Filho

The article analyzes the criteria for, and potential consequences of, streamlined IAs of ethanol projects in Brazil, highlighting ways to enhance the screening and scoping phases of the process.

Predicting CEAA's performance and impact

Brandon Gregg, Kevin Hanna

A Delphi study surveyed EA researchers to predict performance and impact issues in the new Canadian Environmental Assessment Act.

5.9 Asia-Europe dialogue on impact assessment implementation (I)

Monday 13 May | 14:30-16:00 | 100B

Paper session

Chair(s): Anne Merrild Hansen, NN

This special session opens the opportunity for a dialogue to discuss a variety of issues on impact assessment implementation in the Asian-European context. The discussion will cover a wide range of topics such as IA effectiveness, public participation, capacity building and institutional settings.

Comparing quality practice in EIA in Hong Kong and UK

Simon Ho, Henry Leung, Josh Fothergill, Andy Chung

Discusses and compares functions of EIA systems in the United Kingdom and Hong Kong and examines whether the existing systems could be enhanced to meet increasing expectations on quality practice.

Construction and future development of the EIA forum

Feng Ding, Wenhao Zuo

This paper discusses the content setting, technical characteristics, and utilization of information resources of the EIA forum, and then proposes the position and major development task of the EIA Forum.

Two roads to hEAVen: 25 years of EIA in NL and UK

Jos Arts, Thomas Fischer, Hens Runhaar, Urmila Jha Thakur, Frank Van Laerhoven, Peter Driessen, Adam Ant

We discuss a comparative study into the effectiveness of 25 years EIA-practice in the Netherlands and UK. What recommendations can be made to strengthen EIA as an environmental governance tool?

Shape Shifting Frameworks for Project Assessment

Kenneth Green

Using Frameworks for meeting World Bank safeguards requirements has recently expanded. Operational challenges and lessons learned will be presented.

5.10 Asia-Europe dialogue on impact assessment implementation (II)

Monday 13 May | 16:30-18:00 | 100B

Paper session

Chair(s): Anne Merrild Hansen, NN

This special session opens the opportunity for a dialogue to discuss a variety of issues on impact assessment implementation in the Asian-European context. The discussion will cover a wide range of topics such as IA effectiveness, public participation, capacity building and institutional settings.

Public participation in the EU: East and West

Ralph Bergmüller, Jenny Baer-Pásztor

It is vital to understand the culture and history of a country when planning public consultation within the EU.

Practice of public participation in EIA in China

Zhigang Wang, Lixuan Zeng, Jianchun Wang

The regulation IPPE has promoted the practice of public participation in EIA in China, but more detailed requirements are still of high necessity to be revised or enriched in IPPE.

One country, two EIA systems

Cho Nam Ng, Chi Chung Wong

The paper provides an overview of the major differences between the EIA systems in China and Hong Kong with focus on the public engagement and decision making processes.

HEALTH IMPACT ASSESSMENT

Focus on Health - 14 May

The diversity of HIA practice worldwide is both a challenge and an asset, and the IAIA 2013 Health Day presents an ideal opportunity to facilitate dialogue across HIA practice globally. The Health Day and the other health-related activities will explore the importance of health within the Impact Assessment process, will enable IA practitioners to reflect on key lessons learned through the application of HIA, and will conclude with an examination of how HIA needs to evolve to be a better fit for the challenges ahead.

6.1 Integrating health in impact assessments: Opportunities not to be missed (Health I)

Tuesday, 14 May | 09:00-10:30 | Palomino D

Theme forum

Chair(s): Francesca Villani, Rainer Fehr, Marco Martuzzi

IAIA Section: Health

In order to make the most of IA, and to prevent "IA fatigue," we discuss with experts and practitioners from different IA threads (EIA, SIA, SEA, SA and HIA) the interrelation of various IA forms with health, tools and experiences to be shared and pros and cons of IAs integration.

The consideration of health in SEA

Thomas Fischer

This paper summarises the evidence presented in the professional literature regarding the extent to which health is considered in strategic environmental assessment.

Strengthening health in SEA: Where is the gap?

Maria Partidário

Are environmental assessors prepared to work health in IA? Are health practitioners prepared to work health in other types of IA other than HIA? Are respective institutions sufficiently aligned?

Health in EIA in the Nordic and Baltic countries

Heikki Kalle, Charlotta Faith-Ell, Martin Lund-Iversen

Health is considered to be an integral part of EIA in the Nordic and Baltic countries. This paper builds on a comparison of the practice of integrating health aspects.

Health in sustainability assessment

Jenny Pope, Alan Bond

This presentation will explore the relationship and potential for integration between HIA and sustainability assessment.

Health in social impact assessment

Frank Vanclay, Lea den Broeder

The presentation outlines current thinking in social impact assessment (SIA) and discusses where and how health is addressed in SIA.

Integrating Health Impact Assessment (HIA)

Rainer Fehr, Monica O'Mullane, Gabriel Gulis

This presentation discusses health impact assessment (HIA) as an important member within the IA "family," focusing on the commonalities and differences between HIA and the IAs.

6.2 The science and art of international HIA practice: Reflecting the range of HIA practitioners (Health II)

Tuesday, 14 May | 11:00-12:30 | Palomino D

Paper session

Chair(s): Francesca Villani, Lea den Broeder, Marla Orenstein, Ben Cave

IAIA Section: Health

This session aims at presenting the diversity of HIA practices worldwide. While a full and detailed mapping is not possible, the papers will present the most interesting and innovative applications of HIA worldwide. Of special interest are the applications of HIA in new countries and on new topics as this will further enrich practitioners' experience and knowledge.

Health impact assessment in Nigeria: The time has come

Marcus Chilaka

Health impact assessment has the potential to strengthen and improve outcomes from health systems, especially in developing countries. The conditions appear conducive for enhancing the application of HIA in Nigeria.

European experiences with health in impact assessments

Rainer Fehr, Gabriel Gulis, Marci Martuzzi, Walter Ricciardi, Dineke Zeegers Paget

The European Public Health Association (EUPHA) has identified impact assessments (IAs) as a strategic approach to protect and promote human health.

HIA for UK Geological Disposal of Radioactive Wastes

Helen Clark, Robert Fletton

A discussion of the integration of Health Impact Assessment with a Strategic Environmental

Assessment for the UK geological disposal facility for higher activity radioactive wastes.

"Moving the goal posts": HIA in waste planning in Wales

Liz Green

This paper discusses how HIA has been developed in Waste Planning in Wales. It reflects on the achievements but also the emerging issues and future challenges to be faced.

Challenges of HIA in a Yukon mining community

Murray Lee, Marla Orenstein

This presentation examines the first use of HIA by the government of Yukon, Canada, in its effort to address uncertainty resulting from a resumption of mining in a remote community.

6.3 The science and art of international HIA practice: Old issues and new applications (Health III)

Tuesday, 14 May | 14:30-16:00 | Palomino D

Paper session

Chair(s): Francesca Villani, Lea den Broeder, Marla Orenstein, Ben Cave

IAIA Section: Health

This paper session aims at presenting old and emerging issues and applications in the use of HIA worldwide. Papers describing new approaches for tackling established issues such as equity, effectiveness, and follow up alongside emerging issues such as climate change, integrated assessment and strategic and policy HIAs will be presented.

Use of Quantitative Risk Assessment in HIAs

Sharon Quiring, Sinang Lee

Practical considerations for the use of HRA in the HIA process are illustrated using two case studies: a coal-fired power plant in the U.S., and an alumina refinery in Guinea

The Mobile Resource Worker Well-Being Assessment Tool

Angela C. Angel

This paper introduces a unique assessment framework, based on the social determinants of health, to help identify social and health impacts

of resource development projects on mobile resource workers.

Fair? Avoidable? Policy focussed HIA & equity

Ben Cave, Erica Ison, Nicola Cantoreggi, Jean Simos

Equity is a core value of HIA & it seems to be a challenge. We look at policy assessment across Europe & present a practical approach.

Ethics of HIA

Marco Martuzzi

What ethical values really underlie the practice of HIA and other forms of IA? Are we explicit enough about them? Are they clear at all?

6.4 The science and art of international HIA practice: Let's discuss (Health IV)

Tuesday, 14 May | 16:30-18:00 | Palomino D

Workshop

Chair(s): Francesca Viliani, Ben Harris-Roxas, Lea den Broeder, Patrick Harris, Salim Vohra, Marla Orenstein, Ben Cave

IAIA Section: Health

This session aims at reflecting on the inputs presented during the three previous sessions and take the discussion to the next level. The workshop is participative and aims at concluding the day by developing a set of coherent ideas, thoughts and recommendations for helping HIA practitioners improve their practice.

6.5 The science and art of international HIA practice: Example from the industry (Health V)

Wednesday, 15 May | 14:30-16:00 | Palomino D

Workshop

Chair(s): Francesca Viliani, Lea den Broeder, Marla Orenstein, Ben Cave

IAIA Section: Health

This session aims at presenting frameworks and real case experience of how HIA, standing alone or integrated in other forms of impact assessment, has been applied or could be applied by the extractive industry sector to mainstream health consideration within the decision making process.

HIA in Alaska: The Importance of Local Culture

Ame-Lia Tamburrini, Heather Dingman

This presentation uses a case example from Alaska, USA to illustrate how local culture can influence the definition and assessment of health in an HIA.

A framework for cumulative effects in HIA

Martin Birley

A framework for including cumulative impacts at local, regional and planetary scales in health impact assessments, using Athabasca bitumen ("oil" or "tar") sands as an example.

HIA as part of ESHIA in development projects

Geetha Ramesh, Emily Bauk, Deirdre Treissman

This presentation will focus on the inclusion of HIA in ESHIA to address development-related health issues in a systematic and evidence-based manner in global extractive and energy industries.

6.6 Using health impact assessment to achieve sustainable goals

Thursday 16 May | 09:00-10:30 | Mustang

Panel

Chair(s): Geetha Ramesh, Deirdre Treissman, Emily Bauk

IAIA Section: Health

HIA supports the principles of sustainable development by integrating the key aspects of health and the associated risks and benefits. This session will focus on the inclusion of HIA as a planning tool to address development-related health issues in a systematic and evidence-based manner in global extractive and energy industries.

Significant Changes to the Canadian EA Process

Allan Ingelson, Al Lucas, Nickie Vlavianos

To streamline the federal EA process and reduce delays in project approvals, the Canadian EA process was significantly changed in 2012; there is considerable uncertainty about how the new process will unfold.

Health within EIA in the UK and India

Thomas Fischer, Urmila Jha-Thakur, Adam Ant

This paper explores the perception of health within EIA in a developed country (UK) and a developing one (India) and in doing so compares the findings of an online survey.

Mining, Health and Sustainability in British Columbia

Janis Shandro, Aleck Ostry, Malcolm Scoble

This paper describes a project with two First Nations and a municipality associated with British Columbia's newest mine. The project is focused on mitigating health impacts and achieving sustainability.

Emerging Infectious Diseases and Impact Assessments

Louise Flynn, Renuka Bery, Anne-Elizabeth Kaitano

This paper outlines the need to examine vulnerabilities related to emerging infectious diseases in impact analyses, present mitigation options and share tools that companies can use to reduce their vulnerabilities.

Concurrent sessions

INDIGENOUS PEOPLES AND IA

7.1 ABORIGINAL PEOPLES: FPIC

7.1.1 From EA to Impact and Benefit Agreements: Private Governance and Consent

Monday, 13 May | 16:30-18:00 | Quarter Horse A

Paper session

Chair(s): Dan McCarthy

This session considers the increasing use of impact and benefit agreements between resource developers and First Nations as stand alone, environmental governance arrangements. The relation to, and implications for, EA processes is explored with an emphasis on the potential of these arrangements to engender ongoing consent for resource development activities among First Nation communities.

IBAs as Private Governance Schemes: Assessing Legitimacy

Neil Craik

This paper discusses the governance role of impact and benefit agreements and the potential of these agreements to promote legitimate outcomes among First Nations and resource developers.

IBAs as Environmental Management Regimes

Ciaran O'Faircheallaigh

This paper considers the implications of environmental provisions in Impact and Benefit Agreements for Indigenous consent to major projects and for their public regulation.

Anishanaabe Maamwaye Aki Kiigayewin

Mary Boyden, Martin Millen

Anishanaabe Maamwaye Aki Kiigayewin (all people coming together to heal the Earth): This presentation will present a new Indigenous-led model for structuring Indigenous-resource company collaborations.

7.1.2 The application of FPIC: Current practice, future needs

Tuesday, 14 May | 14:30-16:00 | 100B

Paper session

Chair(s): Ana Maria Esteves and Murray Jones

IAIA Sections: SIA, Indigenous Peoples

Free, Prior and Informed Consent (FPIC) is a fundamental right for Indigenous Peoples in the development process. Should FPIC be a discussion process, a negotiation, a focus on benefits agreements, or a community vote? This session addresses how to make dialogue

free and prior, how to inform, who is involved in consent.

IA Practice and FPIC: Irreconcilable conflict?

Ciaran O'Faircheallaigh, Ginger Gibson

We review the relationship between each element of the principle of Indigenous Free Prior Informed Consent and the intent and practice of IA.

Status of FPIC for better extractive sector projects

Peter Croal

This presentation will discuss the status of Free, Prior and Informed Consent (FPIC) with respect to the extractive sector. In particular, the benefits of FPIC for companies will be examined.

Human rights, Indigenous Peoples and the FPIC principle

Philippe Hanna

Companies are encouraged to respect the human right to self-determination through the FPIC process. If fully applied, FPIC may reduce costs, risks and the likelihood of conflict with local communities.

Emerging experiences of the application of FPIC within

Katharine Gotto Walton, Edward O'Keefe

The FPIC concept is gaining increasing currency within extractive industry projects. This paper documents the experiences of projects addressing issues of consent and outlines criteria for practical determination of FPIC.

7.2 INDIGENOUS PEOPLES AND IA

7.2.1 The emerging role of Indigenous Peoples in impact assessment (I)

Wednesday, 15 May | 14:30-16:00 | 100A

Workshop

Chair(s): Martin Haefele, Somia Sadiq

IAIA Section: Indigenous Peoples

This workshop will take a critical look at the young impact assessment regimes of Canada's northern territories, compare them to the longer experience of the northern Quebec's Cree, and provide the perspective of indigenous participants in the process. Participants then engage in a facilitated discussion to identify lessons learned.

Emerging Roles of Indigenous Peoples: The Yukon Story

Michael Muller

Yukon Territory, Canada, has a new assessment process out of First Nation land claims. How the legislation facilitates First Nation participation.

A First Nation's perspective on the Yukon YESAA regime

Roger Brown

This paper examines the present and future of the new Yukon Environmental Assessment regime from the a First Nations' viewpoint of the Spirit and Intent of the Land Claim Agreements.

7.2.2 The emerging role of Indigenous Peoples in impact assessment (II)

Wednesday, 15 May | 16:30-18:00 | 100A

Workshop

Chair(s): Martin Haefele, Somia Sadiq

IAIA Section: Indigenous Peoples

This workshop will take a critical look at the young impact assessment regimes of Canada's northern territories, compare them to the longer experience of the northern Quebec's Cree, and provide the perspective of indigenous participants in the process. Participants then engage in a facilitated discussion to identify lessons learned.

Roles of Indigenous Peoples: The Mackenzie Valley Story

Martin Haefele

Experiences from 14 years of formalized indigenous participation in impact assessment and resulting effects on impact assessment decision making.

Native decision makers in project approval

Cameron McLean, Isaac Voyageur, Kelly Le Blanc, Chantal Tetreault

A land claim treaty includes environmental and social impact provisions for the Cree of Northern Quebec to participate in a meaningful way as decision makers regarding their communities and development.

7.2.3 Engaging aboriginal communities in impact assessment and mitigation

Tuesday, 14 May | 14:30-16:00 | Palomino E

Paper session

Chair(s): Daniel Stuckless, Alvaro Pinto

Much has been learned and new ways have been developed to engage aboriginal communities in the intensely and rapidly developing Athabasca oil sands region. This session will showcase the best practices that have emerged in this unique area and explore issues and solutions to assessing and managing impacts to ensure the long-term sustainability of the communities and their lands.

Importance of Culture in IA Methods

Bruce Muir

BC's approach to assessing impacts from mining on an Aboriginal group and threatened caribou. Methodological failures relating to scope, baseline, and the seriousness of impacts are discussed.

Culturally relevant cumulative effects assessments

Ann Garibaldi, Shanti Berryman, Brad Stelfox, Justin Straker

We advocate a scientifically rigorous cumulative effects assessment approach that directly engages community members to make informed land management decisions about development and land-uses occurring within their traditional territory.

A community-led approach for landscape planning

Shanti Berryman, Ann Garibaldi, Justin Straker, Brad Stelfox, John Nishi

This is an approach for Aboriginal communities to use defensible, science-based information to assess the benefits and liabilities of current and future cumulative land-use on their traditional territory and economy.

Responding to Aboriginal Elders' Visions

Patrice Brown, Ben King

Mining projects in Cape York revolutionising the involvement of Aboriginal people in the conduct of impact assessment, identification of development footprints and selection of low impact export technology.

First Nation involvement in oil sands impact assessment

Lorne Gould

The Fort McKay perspective on wildlife impact assessment process in the oil sands region of Alberta, Canada.

7.3 TRADITIONAL KNOWLEDGE AND IA

7.3.1 Country experiences with oil industries and the environment

Wednesday, 15 May | 11:00-12:30 | Mustang

Paper session

Chair(s): Frank Eklo

Special session of the Norwegian Oil for Development (OfD) program

The Norwegian Oil for Development program provides support for up to 20 participants involved in impact assessment in program cooperating developing countries to participate in the IAIA conference. This session is to give those participants an opportunity to present experiences, lessons learned and problems encountered in their own countries.

Economic displacement: A case study of Uganda

Florence Nangendo, Didas Muhumuza

Uganda is home one of the most successful oil exploration programmes in East Africa. This equally presented some challenges like undertaking proper assessment and compensation for economic displacement.

Environmental impact assessment systems in Lebanon

Rola Sheikh

(OfD special presentation)

This is a presentation of experiences from working with environmental impact assessment

in the Middle East with particular focus on Lebanon.

Environmental assessment of oil exploration and production in sensitive environmental zones of Sudan

Ahmed Idrisy

(OfD special presentation)

Conducting drilling operations in sensitive environmental setting does constitute a real challenge for regulators, oil operators as well as service contractors. This paper will highlight the role and experience of the Sudanese Ministry of Petroleum in enforcing standards to manage the assessments for environment and social impacts to ensure sustainable oil and gas industry.

Oil and gas exploration in national park and EIA

Ijlal Hussain, Ahsan Rafi Kiani, Aden Khan

This paper will evaluate the EIA mechanism as most visible tool used to address environmental and social concerns in providing better understanding on development projects for decision makers.

NEMA and its relationship to the oil and gas companies operating in Uganda

Tom O. Okurut

(OfD special presentation)

Experiences from working with the oil and gas industries in Uganda.

7.3.2 How are Aboriginal values and Traditional Knowledge reflected in EIA? (I)

Tuesday, 14 May | 11:00-12:30 | Quarter Horse A

Paper session

Chair(s): Carol Jones, Jim Howell

Aboriginal communities and EIA practitioners have utilized various methods to incorporate aboriginal values and traditional knowledge into EIA. These have ranged from submission of comments on TORs to submission of independent EIAs. This session explores these methods and provides an opportunity for dialogue to assess their success.

Application of traditional coastal knowledge to EIA.

Howard Smith, Djapirri Munungirritj, Djumbawa Marawili

This paper investigates the application of traditional knowledge from the Yilpara community in Australia's Northern Territory to environmental impact assessments for regional mining, oil and gas developments.

The TK/IQ Panel, EMAB and Diavik

Michele LeTourneau

An assessment of the Traditional Knowledge/ Inuit Qaujimajatuqangit Panel of the Environmental Monitoring Advisory Board for Diavik Diamond Mine.

Utilizing Indigenous Research Methodologies in EIAs

Gillian Donald, Deborah Simmons, Glenda McNeilly, Matthew Whitehead, Peter Fortna, Kim Dertien

Lessons learned in developing updated

Traditional Knowledge Research Guidelines as a basis for utilizing indigenous methodologies in a cross-cultural context to inform decision-making in the EIA process.

7.3.3 How are Aboriginal values and Traditional Knowledge reflected in EIA? (II)

Tuesday, 14 May | 11:30-16:00 | Quarter Horse A

Paper session

Chair(s): Carol Jones, Jim Howell

Aboriginal communities and EIA practitioners have utilized various methods to incorporate aboriginal values and traditional knowledge into EIA. These have ranged from submission of comments on TORs to submission of independent EIAs. This session explores these methods and provides an opportunity for dialogue to assess their success.

TK, Co-Management and IAs in the Sahtu Region, NWT

Deborah Simmons, Walter Bayha, Shauna Morgan, Catarina Owen

A preliminary assessment of a new initiative in collaboration between the Sahtu Renewable Resources Board and local harvesting committees to enhance traditional knowledge inputs in IAs.

HIA: A tool to express Native American values in IA

Ame-Lia Tamburrini

This presentation uses a case study from New Mexico, USA to discuss success factors for using Health Impact Assessment as a tool to express Native American values in impact assessment.

African ghost stories and the oral heritage museum

Paul Wheelhouse

The future preservation of intangible oral heritage is an aspiration. Ghost stories and other oral histories gathered from African mining projects are documented but their future posterity is less assured.

7.3.4 How Indigenous Traditional Knowledge affects impact assessment

Tuesday 14 May | 16:30-18:00 | Quarter Horse A

Chaired panel and discussion

Chair(s): Roman Novozhilov, Gregory Guldin

- Reidar Kvam (Manager, IFC). Presentation on the concept of FPIC and multilaterals approach + Columbia infrastructure case
- Gregory Guldin (Director, Cross-Cultural Consulting Services). Presentation on IPS and Extractives in Indonesia
- Philippe Hanna (Academic). Presentation on IPs and Extractives in Brazil.
- Patrice Brown (E&S consultant). Presentation on Extractives and Aboriginal peoples in Australia.

Panel discussion and questions from the audience.

Concurrent sessions

- Q&A by experts

7.4 OVERCOMING CHALLENGES

7.4.1 Using ecological analysis to assess impacts on rights of Indigenous Peoples

Tuesday, 14 May | 16:30-18:00 | 100B

Papers and open discussion

Chair(s): Petr Komers and Brian Kopach

The inherent right of Indigenous Peoples to maintain their traditional livelihoods requires accurate assessment of impacts from industrial development. Determination of impact significance based on scientific analysis versus perceived cultural values will be discussed with the objective to improve the efficacy of IAs as a tool for indigenous land-use planning.

Introductory Remarks

Petr Komers

Ecological Recovery: Restoring Mauri to pre-Rena State-

Te Kipa Kepa Morgan, Dan Hikuroa, Tumanako Faui, Robyn Manuel

The mauriometer uses four equally weighted dimensions to measure the change in life supporting capacity or integrity of the indicator being considered. Mauri can be measured qualitatively or quantitatively.

Aboriginal Consultation and Cumulative Effects

Ave Dersch

Understanding how a proposed project may impact Aboriginal and Treaty rights cannot be done without an understanding of cumulative effects in a Nation's traditional territory.

Cape York Aboriginal Led Mining Projects

Patrice Brown, Ben King, Gina Castelain, Gerhardt Pearson,

Cape York Aboriginal people are planning on developing their own mining projects with key partners to ensure genuine equity and employment opportunities for their communities and to protect cultural values.

Indigenous consultation and participation in Chilean IA

Carolina Soler, Edesio Carrasco Quiroga, José Adolfo Moreno Correa

A review on recent changes on Chilean regulation regarding to ILO Convention No. 169, the role of Supreme Court decisions and the new approach with indigenous community.

Technical Review of EIAs: An Aboriginal Framework

Bruce Muir

The lessons learned by Aboriginal groups in northeast British Columbia when tackling their capacity challenges. An Aboriginal-based framework for the technical review of EIAs is presented.

Climate change: Mexico's biodiversity and indigenous rights

Martin Quijano, Grethel Villicaña

This paper shows the importance of ESIA in the context of climate change, biodiversity and indigenous rights in a case study of a wind farm in Mexico.

Open discussion with speakers and audience.

7.4.2 Consultation and engagement with Indigenous Peoples in extractive sectors (I): Consultation in Latin America and Canada

Wednesday 15 May | 14:30-16:00 | Arabian A

Roundtable

Chair(s): Angeles Mendoza, John Devlin

IAIA Sections: Indigenous Peoples, Public Participation

Government policy commonly sets the processes and times for consultation and engagement with Indigenous People. How does this meet their various needs? From their perspective, Indigenous People will talk to IA practitioners and audience about what is missing and how to improve the processes and outcomes of consultation and engagement.

Sustainable Development: The impacts of no consultation or engagement with indigenous people in Mexico

Angeles Mendoza, Front for the Defense of Necaxa, Puebla, Mexico and White Eagle

Impact-Benefit Agreements

Ben Bradshaw, Associate Professor of Economic Geography, University of Guelph

Traditional consultation Models among first Nations in Canada

Reg Crowshow, Treaty 7 Management Corporation, Former Chief of the Piikani First Nation

7.4.3 Consultation and engagement with Indigenous Peoples in extractive sectors (II): What is missing to improve consultation and engagement

Wednesday 15 May | 16:30-18:00 | Arabian A

Roundtable

Chair(s): Angeles Mendoza, John Devlin

IAIA Sections: Indigenous Peoples, Public Participation

Government policy commonly sets the processes and times for consultation and engagement with Indigenous People. How does this meet their various needs? From their perspective, Indigenous People will talk to IA practitioners and audience about what is missing and how to improve the processes and outcomes of consultation and engagement.

Traditional consultation Models among first Nations in Canada

Reg Crowshow, Treaty 7 Management Corporation, Former Chief of the Piikani First Nation

The Experience of Treaty 7

Brent Scout, Treaty 7 Grand Chiefs Liaison: Consultation and Engagement

Tervita building and enhancing Aboriginal Relations for new and existing operations

Andrea McLandress - Team Lead Aboriginal Relations

Brian Calliou, Director of Indigenous Leadership and Management, The Banff Centre

First Nations consultation and policy

Bob Watts, Consultant, Former CEO of Assembly of First Nations

Facilitating complex relations and cross-cultural understanding with Aboriginal communities

David Turner, Vice-President, First Peoples Group, Western Canada

RESOURCE DEVELOPMENT AND IA

8.1 ENERGY INDUSTRY AND BEST PRACTICES

8.1.1 Hard Limits: EIA and a new generation of Clean Energy Projects in BC 46

Monday, 13 May | 16:30-18:00 | Quarter Horse C

Panel discussion

Chair(s): *Paul Kariya, Susan Wilkins*

The clean energy sector in British Columbia was championed for growth and advancement over the past two decades. Dozens of run-of-river, wind, biomass and other projects were built by the private sector. Has it achieved the goal of a sustainable and environmentally friendly energy sector? Come and hear the perspectives of our panelists.

- Craig Orr, Watershed Watch Society
- Bruce Muir, West Moberley First Nation
- Colleen Giroux-Schmidt, Innergex Renewable Energy Inc.
- **Brian Murphy**, BC Environmental Office

8.1.2 Hydropower projects: Tumultuous journey or a peaceful march from approval?

Tuesday, 14 May | 11:00-12:30 | Arabian A

Paper session

Chair(s): *V.B. Mathur, Asha Rajvanshi*

IAIA Section: Biodiversity & Ecology

Responsible development is an outcome of several policy decisions and their effective implementation of which "compliance monitoring" of mitigation measures outlined in SEA and CEA is most critical. This session will distil global experiences on this issue and suggest remedial measures to address this lacunae in IA process and practice.

Environmental performance indicators of big dams

Andrés Said, Gustavo Zuleta

The aim of this study was to develop environmental performance indicators (EPIs) that simplify the decision making during the operational process of major dams in Argentina.

What Are Reasonable Practice Standards for CEA in IA?

Jill Gunn, Bram Noble

This paper attempts to characterize reasonable practice standards and criteria for CEA scoping, analysis, and mitigation within the context of a single project development.

Natural Habitats in Hydroelectric Projects

Juan D. Quintero

Different approaches for mitigating and compensating impacts on natural habitats in large hydroelectric projects are analyzed in three projects in different regions of the world.

Analyzing Hydropower Follow Up Processes in Brazil

Verena Rodorff, Johann Köppel, Marianna Siegmund-Schultze,

INNOVATE studies social and ecological impacts after construction of Itaparica Hydropower Reservoir in Brazil. The analyzing process is accompanied by an Inter- and transdisciplinary tool supporting the decision making process.

Environmental assessment of a river watershed planning

Yangqi Li

According to Yerqiang River watershed planning, the paper appraises the sustainability of water resources use, and restrictive factors that involves the coordination between the watershed planning and other related planning.

DRAFT

Concurrent sessions

EFA and the impacts on rivers ecological integrity

Maria Antonieta Gomez-Balandra, Pilar Saldaña-Fabela, Marco Antonio Mijangos-Carro, Sergio Rodríguez-Torres

Environmental Flow Assessment (EFA) as an escalated set of methodologies is becoming an important tool to assess from rivers flow alterations to their ecological integrity.

8.1.3 Emerging Good Practices in Oil and Gas Operations

Tuesday, 14 May | 14:30-16:00 | Arabian A

Paper session

Chair(s): Elizabeth Brito

This session will present environmental and social practices from private sector oil and gas companies, particularly in IA, biodiversity management, protection of Indigenous Peoples, influx management, participatory monitoring, and sharing of the benefits and wealth originated by oil and gas projects. Industry representatives will provide their experiences with sustainable and responsible oil and gas operations. These experiences will contribute to advance the IA practice and foster a new generation of responsible oil and gas industry.

Community environmental monitoring program in Cusco

Rafael Guarderas

Independent and original program of TgP that promote the effective participation of native communities in the social and environmental watch of the activities carried out by the company.

Participatory Social and Environmental Monitoring

Pablo Taborga, Carolina Casaretto

PERU LNG developed a Social and Environmental Monitoring Program to promote the active involvement of local stakeholders in the oversight of the performance of the Project.

Biorestitution of Andean Wetlands in Peru Gas Pipeline

Virgilio Panduro, Gisella Vilca, Alan Garcia, Jose Hernani, Enrique Tovar, German Sulca

The biorestitution works allowed their progressive recovery of these sensitive areas and together with the best practices and behaviors of the local communities will become a sustainable effort.

Responsible local content practice in oil and gas

Ana Maria Esteves

Local content is increasingly used to transform resource extraction into industrial and economic activity. Global examples inform implementation issues and aligning project development, local content development and local economic development.

N-Solv BEST Process in oil sands extraction

Hanif Ladha, Alex Stickler, Lyne Thompson

This paper will discuss the development of the N-Solv BEST Field Pilot Plant, a new sustainable oil sands extraction process.

Devastation of the environment through illegal refining

Confidence Wachukwu, Amber Ollor

The level of devastation and environmental degradation due to illegal refining and crude oil theft in Nigeria may result to major environmental crisis if it continues unabated.

Brazilian oil and gas EIA: Old habits and new guidelines

Gustavo Almada, Cristiano Guimarães, Guilherme Carvalho, Carolina Alves, Alexandre Souza, Clarissa Condé, Eduardo Senna, Beatriz Abrahão, Arianna Camardella

This paper explores how Brazilian Environmental Agency (IBAMA) has significantly improved methodological guidelines for EIA applied to the environmental licensing process of offshore oil and gas projects.

8.1.4 How can we make the oil and gas industry environmentally responsible?

Wednesday 15 May | 11:00-12:30 | Palomino F-H

Special workshop of the Norwegian Oil for Development (OfD) program workshop (open to all attendees)

Chair(s): Peter Tarr, Bryony Walmsley

The conveners will give a short introduction to the workshop and subsequently guide the discussion. They will seek to engage the participants in topical exchanges of experiences and stimulate ideas and discussion. The focus will be on social, health and environmental impacts in the oil and gas industry with particular attention to extraction from oil sands. There will be ample opportunities for participants to share ideas and views.

8.1.5 Environmental monitoring in the oil sands

Wednesday, 15 May | 11:00-12:30 | Palomino A-C

Paper session

Chair(s): Martin Jalkotzy

This session will present environmental practices and challenges monitoring aquatic and terrestrial resources in the oil sands region of northern Alberta.

Holistic monitoring using aquatic bioindicators

Darrell Jobson, Henri de Pennart

Innovation and modern technologies can enhance monitoring applications and assessment of aquatic bioindicators which can be used to ascertain biological responses to development and environmental change.

Mitigating Oil Sands Impacts on Boreal Caribou

Amit Saxena

Recovering boreal caribou in the oil sands region will require innovation, collaboration and partnerships between all industries and government regulators to manage populations, habitats and landscapes.

Monitoring Species at Risk: Dealing with Detectability

Derek Ebner, Marcel Gahbauer, Douglas Hallett

Monitoring species at risk as a requirement of Oil Sands developments is challenging due to their rarity. Detectability must be taken into consideration during the design of any monitoring program.

8.1.6 Understanding and Managing Cumulative Impacts in Resource Regions (I)

Wednesday 15 May | 11:00-12:30 | Palomino E

Paper session

Chair(s): Daniel Franks

The session will interrogate the effectiveness of new and traditional policy responses, explore methods and strategies to better respond to cumulative impacts, and detail practical examples of collaborative and coordinated approaches. Papers address a range of social, environmental and economic issues, geographical regions, commodities, and conceptual approaches.

Closing Gaps: Cumulative Models and Adaptive Management

David Blaha, Anne Southam

By integrating the results of cumulative effects models into an adaptive management strategy, resource managers may be better able to respond to changes in the ecosystem.

Cultivating collaboration to address cumulative impacts

Daniel Franks, Jo-Anne Everingham, Madeleine Porter

Thirty case studies of collaborative governance in the Australian resources sector are analysed with lessons drawn on the challenges and benefits of collaboration as a means to address cumulative impacts.

Understanding Cumulative Impacts of ASGM in Ecuador

Colón Velásquez López, Rebecca Adler Miserendino, Bridget A. Bergquist, Sara E. Adler, Jean R.D. Guimarães, Peter S.J. Lees, Wilmer Niquen, Marcello M. Veiga

Challenges to measuring, monitoring and addressing artisanal and small-scale gold mining (ASGM) impacts in Ecuador are discussed. Recommendations are made to better engage with ASGM and their cumulative impacts.

Assessing cumulative effects in Northern Canada

John Virgl

Investigation of cumulative effects is an important part of current impact assessment practice. A transparent and comprehensive example of a recent evaluation of incremental and cumulative effects will be presented.

8.1.7 Understanding and Managing Cumulative Impacts in Resource Regions (II)

Wednesday 15 May | 14:30-16:00 | Palomino E

Paper session

Chair(s): Daniel Franks

The session will interrogate the effectiveness of new and traditional policy responses, explore methods and strategies to better respond to cumulative impacts, and detail practical examples of collaborative and coordinated approaches. Papers address a range of social, environmental and economic issues, geographical regions, commodities, and conceptual approaches.

Household analysis for understanding social changes

Gerardo Castillo

This presentation discusses some of the weaknesses of the conventional Social Impact Assessment approach and proposes focusing on household analysis as a complementary way for dealing with these shortcomings.

Assessment of freshwater dam within a mining catchment

Samuel Ndur

Water quality, sediment, dam, trigger value, concentration levels.

Linking EIA to CIAM

Juan Carlos Paez

This presentation aims at bringing together an audience to analyze the proposed methodology as a tool to perform a CIAM from the results of an EIA.

Applying Interdisciplinary ESHIA in the Arctic

Kim Swanzey, Anne Southam

By applying lessons learned through project experience in Alaska and Greenland, this paper presents integrated social engagement and impact assessment strategy that responds to the Arctic's unique risks and opportunities.

Addressing Arctic Aspirations

Mark Shrimpton

The paper reviews, and discusses best practice responses to, the aspirations and concerns of Arctic peoples related to upstream petroleum industry activity.

The Rapidly Changing Arctic- Challenges for ESHIA/SEMPP

John Aronson

The physical, chemical, biological, social, regulatory, and engineering complexities of the rapidly changing Arctic must be understood for effective ESHIA and SEMPP development.

SEA opportunities and constraints in the western Arctic

Bram Noble, Courtney Fidler

SEA remains uncharted territory in Canada's western Arctic. The perceived risks of foregoing development and adding regulatory complexity create much uncertainty around SEA and outweigh its perceived benefits.

8.2.2 The next frontier: Development of Northern regions

Tuesday 14 May | 09:00-10:30 | Palomino F-H

Theme forum / Moderated panel discussion

Chair(s): Yolanda Banks

Northern and Arctic regions present opportunity for economic development, yet development in these regions has the potential for significant adverse social and environmental impacts.

Experts will discuss best practices for managing impacts, assessing effects that may contribute to climate change, securing the "social license to operate," and the role of environmental assessment.

need to confirm panelists

8.2 ENERGY IN THE ARCTIC

8.2.1 Arctic Hydrocarbons: Addressing Community Aspirations and Effects

Tuesday 14 May | 11:00-12:30 | 100B

Paper session

Chair(s): Mark Shrimpton, Nick Poushinsky

The loss of ice cover and large resource estimates are driving increased hydrocarbon activity in the Arctic. While new technologies are addressing the harsh environment challenges associated with working in these areas, less attention is being paid to the interests and aspirations of the approximately four million people who live in the Arctic. The papers in this session explore these interests and aspirations and discuss how they and the potential community effects can be addressed.

8.3 FINDING THE BALANCE FOR SUSTAINABLE DEVELOPMENT

8.3.1 Energy needs vs. indigenous interests and development concerns

Wednesday 15 May | 09:00-10:30 | Palomino F-H

Theme forum

Chair(s): Arne Dalfelt, Terje Lind?

Special session of the Norwegian Oil for Development (OfD) program

Emerging conflicts between societies' needs for energy and the concerns over climate change impacts both on indigenous people and the public in general, requires guiding policies that look way beyond short term economic interests.

The oil and gas industry is rapidly approaching a point where public and political concerns for the future may be limiting the industrial options.

Environmental and Social Issues of the Oil sands of Alberta, Canada

Peter Croal

(OfD special presentation)

This presentation examines the social and environmental issues related to the oil sands projects of Alberta, Canada, with particular focus on Indigenous Peoples.

Reflections on project preparations from developers in «New» settings

Svein Grotli Skogen

(OfD special presentation)

This presentation gives some reflections into sophisticated planning of oil and gas projects when "entering new territories." Case situations where organizations planning for very profitable projects, if necessary with handsome payments for mitigation and compensation, meets clean no-go situations.

Learned lessons in SEA: The Orinoco oil belt (Venezuela)

Oscar Gomez

The particular situation of the Strip of the Orinoco, SEA's methodology adapted for this project of development of a vast and extensive territory, and recommendations and learned lessons.

Oil and gas developments in regions of conflict

Arne Tesli

(OfD special presentation)

This presentation will focus on particular challenges for EIA and Social Impact Assessments (SIA) of oil and gas developments in regions of conflict. It will also discuss institutional issues and public participation and involvement of affected parties.

8.3.2 Negotiating impacts and impact mitigation with oil and gas companies

Wednesday 15 May | 16:30-18:00 | Quarter Horse B

Workshop

Chair(s): Morgan Hauptfleisch, Peter Tarr, Bryony Walmsley

Special Norwegian Oil for Development (OfD) program workshop (open to all)

This workshop will demonstrate negotiation techniques in practice. It will focus on providing negotiated information to be used in the decision making process after an impact assessment has been done. The negotiations will be based on a fictiously planned oil or gas project with five or six interest groups being involved in the negotiations.

8.3.3 Indigenous Peoples and

Concurrent sessions

CSR in the extractive sector

Wednesday 15 May | 11:00-12:30 | Arabian A

Paper session

Chair(s): *Jose Juan Zorrilla*

IAIA Sections: Public Participation, Indigenous Peoples

Indigenous communities are often in a disadvantage when dealing with companies and governments in relation to the extraction of resources from indigenous territories. This session explores the relationship between Impact Assessment and CSR when attempting to balance the economic interests of mainstream society and indigenous people's welfare.

Essential alignment: CSR and SIA

Robert Scace, Lila Barrera-Hernandez

CSR and SIA pathways variously engaged to support relationships with indigenous communities though inconsistency can adversely affect sustainable development. CSR provides means for more effective alignment.

How IA could improve CSR in Mexico's mining sector

Angeles Mendoza Sammet, Veronica Chirino Baker

A discussion of disparities between Mexico's IA and mining regulations and practice; its links to low CSR in the sector, and suggestions to improve IA and CSR to reduce conflict.

8.4 IA AND ALBERTA OIL SANDS

8.4.1 Alberta Oil Sands (I): Facing the future of challenges and opportunities

Monday 13 May | 11:00-12:30 | Palomino D

Theme forum

Chair(s): *George Hegmann*

Panel members from a variety of backgrounds will speak to the current challenges and future opportunities to assess, manage and monitor effects of Alberta's oil sands. Each panel member will represent at least one key topic (e.g., regional management, cumulative effects, reclamation, regional monitoring, social impacts, carbon management), to be identified prior to the session in a coordinated fashion amongst the panelists. This focus would accompany insights from their respective experience in general.

- Daniel Stuckless, Manager, Environment and Regulatory, Fort McKay Sustainability Department, Fort McKay First Nation, Fort McKay, Alberta
- Bev Yee, Assistant Deputy Minister, Integrated Resource Management Planning, Environment and Sustainable Resource Development, Government of Alberta
- Peter Koning, Manager, Environment and Sustainable Development, ConocoPhillips Canada Resources Corp.
- Robert Mugo, Environment Manager, Total E&P Canada
- Simon Dyer, Policy Director, Pembina Institute

The panel will be supplemented by one guest with a broad insight into the oil sands and current engagement on oil sands issues in an academic institution:

- Chris Powter, Executive Director, Oil Sands Research and Information Network (OSRIN), School of Energy and the Environment, University of Alberta

8.4.2 Alberta Oil Sands (II): Conference findings

Thursday 16 May | 09:00-10:30 | Palomino D

Panel discussion

Chair(s): *George Hegmann*

A panel of selected conference participants will speak of what they have heard during the conference regarding Alberta's oil sands, express their views on the future of the oil sands regarding environmental issues, and take questions from the audience.

The finalization of panel members will be made during the conference (with the exception of one selected guest panelist) as identified by the session chair and conference co-chair (Miles Scott-Brown).

BUSINESS AND IA

9.1 CORPORATE STEWARDSHIP AND RISK MANAGEMENT

9.1.1 What gets measured gets managed: Applications of impact assessment for corporate responsibility

Wednesday 15 May | 09:00-10:30 | Arabian B

Theme forum

Chair(s): Sara Bice, Rita Sully

Section: CSR Section

Corporate Stewardship (or Corporate Responsibility) has become a mainstream means for business to address various impacts. This theme forum reimagines CR for the next generation, exploring opportunities aimed not just at minimizing the impacts of big business, but rather enhancing benefits. Interactive session with case studies covering health impact assessment, community investment and supply chain management.

Health as a measurable and effective component of CSR

Francesca Villani

Health is a pillar of CSR and its inclusion within a company strategy goes beyond philanthropic health interventions, it does require full mainstreaming and proper consideration in impact assessment.

Supply chain management as part of CR and IA activities

Stanislav Suprunenko

Paper considers evidences of practical application of Supply Chain Management system and share examples of introduction of its principles in the projects financed by European Bank for Reconstruction and Development.

Leveraging IA in community investment planning

Kim Swanzey, Kristina Mitchell

Community investment planning presents an opportunity for companies to strategically measure and manage their non-technical risk, when it is informed by the ESHIA process and tied to corporate objectives.

9.1.2 Application of IFC Performance Standards by Financial Intermediaries

Wednesday 15 May | 09:00-10:30 | Palomino D

Theme forum

Chair(s): Mauricio Athie, Reidar Kvam

The recent review of the International Finance

Corporation' (IFC) Performance Standards clarified and improved the way in which the institution works with its financial intermediaries. This forum will present IFC's approach to environmental and social management systems when working with FIs, including IFC's revised risk categorization approach.

Application of IFC Performance Standards by Financial Intermediaries

Felipe Albertani

This paper presents IFC's approach to environmental and social assessment, including risk categorization, and management systems (ESMS) for financial intermediaries

9.1.3 Social License to Operate: The next generation of measuring and monitoring (I)

Tuesday 14 May | 11:00-12:30 | 100A

Paper session

Chair(s): Sara Bice, Robert Boutilier

IAIA Section: CSR

Social Licence to Operate (SLO) is being embedded into IA, risk-management and project planning. But what, exactly, is a social license? How might it be measured? And how is it informing assessment practices, risk management and stakeholder engagement? Join us in the first of two concurrent sessions for debate on the concept of SLO and discussion of its application in recent cases.

What the social license is and isn't

Robert Boutilier

The concept of the social licence to operate has evolved from a metaphor for requirements beyond legal permitting to an approach to stakeholder relations that, controversially, views stakeholders as powerful.

Towards an empirical model of social licence

Kieren Moffat, Airong Truffet

Informed by a critical analysis of the use of SLO by mining companies and personnel, this study provides empirical evidence for a model of social licence.

The link between cognitive legitimacy SLO

Cyrlene Claasen

This paper considers the cognitive aspects of organizational legitimacy and how these affect the social license to operate by examining Namdeb, PPJV between De Beers and the Government of Namibia.

SIA: A tool to obtain the social license to operate

Rikke Carlsen

In Greenland, the SIA process is a tool for local engagement and a requirement to obtain and maintain the social license to operate.

Earning a social licence amidst complexity

Jason Prno, Scott Slocombe

We present a novel framework for assessing SLO determinants and outcomes, introduce the concept of a "resilient" SLO, and discuss key issues and opportunities for mining industry governance.

9.1.4 Social License to Operate: The next generation of measuring and monitoring (II)

Tuesday 14 May | 14:30-16:00 | 100A

Paper session

Chair(s): Sara Bice, Robert Boutilier

IAIA Section: CSR

Social Licence to Operate (SLO) is being embedded into IA, risk-management and project planning. But what, exactly, is a social license? How might it be measured? And how is it informing assessment practices, risk management and stakeholder engagement? Join us in the second of two concurrent sessions for debate on the concept of SLO and discussion of its application in recent cases.

A Strategic Approach to Early Stakeholder Engagement

Edward (Ted) Pollett, Adriana Eftimie, Rebecca Darling

Some recent good practice approaches to early strategic stakeholder engagement, establishing the business case for a "social license to operate," and quantifying the financial value of these relationships.

A case study of The Upper Hunter Mining Dialogue

Leeora Black

Participatory governance needs to be included in the stakeholder engagement methods used to raise a social licence because of its role in securing the social contract component of the model.

Fracking in Alberta and Implications for Aotearoa NZ

Te Kipa Kapa Morgan, Manaia Rehu, Henare Waihape, Robyn Manuel, Dan Hikuroa

The mauri-ometer assesses impact upon the change in life supporting capacity. Mauri

Concurrent sessions

can therefore be measured qualitatively or quantitatively using this new tool that is especially useful in indigenous contexts.

Tracking well-being in Northern Ontario's Ring of Fire

Ben Bradshaw, Peter Siebenmorgen

This paper reports on the development of a process to track well-being of residents of Eabametoong First Nation in Northern Ontario's Ring of Fire based on community developed indicators.

Limits of using perceptions of the operator to measure SLO

Julia Roloff, Cyrlene Claasen, George Acheampong

We analyse the link between the social licence to operate and the perceived impact of mining operations using data from stakeholder networks of three mining sites in Africa.

9.1.5 Trends in human rights impact assessment in a post-Ruggie world

Tuesday 14 May | 11:00-12:30 | Quarter Horse B

Paper session

Chairs(s): Rita Sully, Sara Bice

The United Nations' unanimous endorsement of John Ruggie's Guiding Principles for Business and Human Rights was a watershed moment in the progressive embedding of human rights considerations into regular business practice. Building on the sessions presented at the IAIA Puebla and Porto conferences, this panel will follow the trends and direction of human rights impact assessment in a post-Ruggie world. Many companies are still assessing their approach to human rights impact assessment, and are yet to determine whether to integrate into a broader impact framework or completely reframe to a rights-based approach.

Too early for human rights assessment typologies?

Richard Boele

Two years after Ruggie finished his work, is it too early, or already late in the day, to start articulating a human rights assessment typology?

Principles for Conducting HRIAs

Alison Colwell, Roger McElrath, Faris Natour, Jessica Davis Pluess, Chloe Poynton, Michael Oxman

BSR will present our principles for conducting HRIAs. The principles, including customization, company ownership & integration, highlight the importance of integrating the impact assessment process into business decision-making.

Integration of human rights into impact assessment

Frank Seier, Nora Götzmann, Bert Fokkema, Roper Cleland

IPIECA and the Danish Institute for Human Rights will present their findings on how assessment of human rights can be integrated into good practice ESHIA.

Facing the HRIA future together

Susan Joyce

The HuRiIA Panel will be an opportunity to reflect on advances of models and applied practice and the shared discussion with other practitioners will be an important contribution.

Using SWAP to connect water, human rights and mining

Alan Woodley, Nina Collins

This work presents a methodology that captures the social water context of mine sites to connect external impacts with operational practices.

9.2 FINANCE AND IA: THE IMPACT OF NEW STANDARDS

9.2.1 Evolving Standards in Environmental Assessment (I)

Wednesday 15 May | 14:30-16:00 | Palomino A-C

Paper session

Chair(s): Emlen Myers

This session will draw together a variety of EA consultant practitioners, who work with evolving standards alongside representatives of IFIs, to discuss the changes to these standards in practical terms. By focusing on the implementers' experience, complemented by institutional experience, the papers will convey an on-the-ground view of how evolving EA standards work best, where the 2012 improvements have helped, and where improvement may still be needed.

The evolution of sustainable finance: What's next?

Peter Moore

Examining both domestic and international environmental and social standards, this presentation will provide insight into the evolution of sustainable financing: where it all began, current best practices and future challenges.

Can we have global standard on environmental and social governance?

Prasad Modak, Rahul Datar, Lucille Andrade

Financing institutions have played a key role in harmonization of ESG across the world. But is a global standard on ESG realistic and achievable given unevenness across the countries?

The emerging role of country safeguard systems in EA

Harvey Himberg, Xiaoying Ma

The central theme of this paper is the extent to which Country Safeguard Systems have reached a critical threshold relative to the safeguard systems of multilateral development banks.

Safeguards for countries involved in carbon financing

David Annandale

The global climate finance architecture is extraordinarily complex. One common feature, however, is the requirement that REDD+ activities should only be undertaken with direction from appropriate environmental and social safeguards.

9.2.2 Evolving Standards in Environmental Assessment (II)

Wednesday 15 May | 16:30-18:00 | Palomino C

Paper session

Chair(s): Emlen Myers

This session will draw together a variety of EA consultant practitioners, who work with evolving standards alongside representatives of IFIs, to discuss the changes to these standards in practical terms. By focusing on the implementers' experience, complemented by institutional experience, the papers will convey an on-the-ground view of how evolving EA standards work best, where the 2012 improvements have helped, and where improvement may still be needed.

Mind the gaps: Lessons learned in acting as IESC

Caleb Wall

Lenders often engage an IESC in financing projects. This paper discusses the different ways in which the IESC fulfills its role, providing lessons learned and examples of successes (and failures).

Natural habitat policies of multilateral and bilateral organizations

Juan D. Quintero

A review of natural habitat policies in major multilateral and bilateral organizations.

Archaeological risk management and performance standard 8

Emlen Myers, Doug Park

This paper shows how modern digital techniques of archaeological baseline research are used to manage construction-phase risk in large foot-print projects, both reducing archaeological impacts and enhancing commercial success.

Applying IFC standards on climate change risk analysis

Leanne Farrell, Ariane Burwell

How are ESAs interpreting and applying the new IFC Performance Standards requirements on incorporating climate change risk and vulnerability into project assessments? This paper explores emerging challenges and good practices.

Best Practice Stakeholder Engagement begins at Day 1

Ross Mitchell, Kristina Mitchell

Considering the "prior" in FPIC, consultation activities that take place early on and often are key to successful community engagement. Lessons learned from various projects are described in this paper.

9.2.3 International Financial Institutions: Evolving ESIA practices and standards for addressing human rights

Wednesday 15 May | 11:00-12:30 | 100A

Panel

Chair(s): Kamil Zabielski, Deborah Berger

Standards and practices of IFIs with respect to

ESIAs have evolved considerably in recent years. The IFC, Export Credit Agencies of the OECD, and Equator Principle Financial Institutions have all completed, or are in the process of completing revisions of the standards by which they require and review ESIA. Further clarification pertaining to social and/or human rights issues has received significant attention by these institutions and will continue to do so in the future.

ECA perspectives on social risks and human rights

Deborah Berger, Kamil Zabielski

Two ECAs will share their views on how the developments in the OECD Common Approaches framework are reflected in their daily operations with respect to social issues and human rights.

IFC Performance Standards and Human Rights

Debra Sequeira, Felicity Kolp

An overview of IFC's approach to human rights under the Performance Standards, including guidance on human rights due diligence.

What is unique about assessing human rights impacts?

Rachel Davis

The adoption of the UN Guiding Principles on Business and Human Rights helps clarify what is required in assessing human rights impacts, with implications for evolving ESIA standards and practices.

ROLE OF IA IN PROJECT DECISION MAKING IN A SUSTAINABLE WORLD

10.1 Socio-Environmental Risk Assessment in EIAs

Wednesday 15 May | 16:30-18:00 | Palomino E

Paper session

Chair(s): Simon Catchpole, Roberto Moreno

The objective is to demonstrate the importance of considering environmental risk in EIAs, and also of the importance of involving environmental professionals in the overall risk assessment and risk management of an enterprise. The ERA in an EIA should feed into the project risk management plan.

The value of early stage engagement and risk management

Stuart Heather-Clark, Christelle van der Merwe, Leon Broom, David Shandler, Mariam January, Junaid Moosajee, Tarisai Garande

Experience gained in a South African Oreline upgrade shows the value of stakeholder and sustainability risk management interventions early in the project lifecycle as a foundation for a subsequent EIA.

Limitations of risk assessment for pipelines in Brazil

Andre Naime

This paper discusses the relationships between the limitations of Brazil's regulatory setup for new oil and gas transmission pipelines and the rising of societal risks in suburban areas.

Socio-economic impact studies and risk management

Susan Dowse, Jay Wagner, Murray Jones

The Socio-economic Impact Study carried out by the authors on behalf of the project proponent during 2012 represents an innovative approach in project planning in remote and sensitive areas.

Risk assessment simulation of the toxicological impacts

James Phibbs, Michael Sanborn

This is a simulation study conducted to demonstrate the usefulness of quantitative risk assessment in the conceptual design, alternatives assessment, and ultimately development of a rare earth element mine.

10.2 Next generation IA: Tiering of IA and planning

Wednesday 15 May | 16:30-18:00 | Arabian B

Paper session

Chair(s): Heikki Kalle, Jos Arts

Tiering is a key element of EA, but practice shows

a blurred picture. In this session we will discuss best practices and conceptual innovations related to tiering so that the concept can reach its full potential to IA.

Multiproject integrated EIA: Brazil offshore case

Cristiano Guimarães, Guilherme Carvalho, Leonardo Teixeira

This successful multiproject integrated EIA of offshore oil sector illustrates the benefits of integration and the inherent limitations of project-level EIA.

The long road to shorter planning and improving EIA

Johan (Hans) De Vries, Jos Arts, Jeroen Weertman

The paper will present an overview of evaluation results of a comprehensive programme aimed at improving and shortening the planning and SEA/EIA process for road infrastructure in The Netherlands.

Towards a Next Generation IA: Careful Tiering of IA and

Heikki Kalle, Jos Arts

Tiering is a key element of EA but practice shows a blurred picture. This paper discusses best practices and conceptual innovations related to tiering to enhance next generation IA.

Recent practical and legal changes on Chilean IA System

Manuel Bugueño, Jose Adolfo Moreno Correa, Edesio Carrasco Quiroga

Latest legal and practical changes made in 2010 Chile in order to encourage early and more technical decisions. Did it work?

10.3 EIA success: Case studies (I)

Monday 13 May | 14:30-16:00 | Arabian B

Paper session

Chair(s): Miguel Coutinho

What is an EIA success? The session will include presentations of several EIA case studies. EIA success stories show the relevance of EIA to stakeholders. It is important to discuss from these case studies, the contribution that IA professionals, consultants, promoters and administration, might have to adopt more sustainable decisions.

Impacts and Influence of the Timber Class Environmental

Wanda Leung, Kevin Hanna

In Ontario EA has had a significant impact on forest management, and helped shape

Concurrent sessions

institutional approaches to forestry policy. EA can play a key role in managing public forests.

The improvement of Porto Sul project through EIA

Mariana Pereira, Daniel Pinho, Liana Nascimento, Elizabeth Uema, Leandro Cordeiro

This article shows how the EIA and the analysis of locality and technological alternatives are important tools to reduce environmental impacts.

EIA of Pakistan deep water container port

Muhammad Sabir, Yahya Usmani, Waqar Phulpoto

As per recommendations in the IEE report which was part of the detailed feasibility study of the project an extensive Environmental Impact Assessment has been developed.

Socio-economic Impacts of military-induced growth

Paul Sage

This presentation will outline the study approach, processes used and findings of a socioeconomic impact assessment study conducted on the military induced population growth on the US territory of Guam.

10.4 EIA success: Case studies (II)

Monday 13 May | 16:30-18:00 | Arabian B

Paper session

Chair(s): Miguel Coutinho

What is an EIA success? The session will include presentations of several EIA case studies. EIA success stories show the relevance of EIA to stakeholders. It is important to discuss from these case studies, the contribution that IA professionals, consultants, promoters and administration, might have to adopt more sustainable decisions.

The role of EIA for project sustainability

Asnake Mekuriaw

EIA is a very important tool to make projects sustainable and thus to bring sustainable development.

ESIA: A tool in participatory decision making

Matsin Nzokam Aline Sidonie, Chi Forpah Napoleon, Ndongo Barthelemy

Environmental and social impact assessment key for evaluation of environmental problem and guide decision makers for generation and implementation of sustainable projects in benefits of community.

ESIA in countries with limited regulation: Case of DRC

Benoit Vanwelde, Taea Calcut, Hannah Young

The paper identifies issues and risks for projects in countries with limited environmental and social regulation (e.g., DRC) and shows how voluntarily applying international and corporate standards can minimize risk.

The EIA was a success but the project is failing

Harry Spaling, Geoff Brouwer, Jesse T. Njoka

A water project in Kenya had a “good” EIA completed ten years ago but is now at a sustainability tipping point—it may yet fail. Can sustainability be recovered?

10.5 Improving communication between IA practitioners and decision makers

Tuesday 14 May | 14:30-16:00 | Mustang

Paper session

Chair(s): Luis E. Montañez-Cartaxo, Weston Fisher, Gunnar Baldwin

What techniques can be used to help ensure the recommendations made in impact assessment studies by IA specialists and/or the opinions of interested third parties are taken more seriously by proponents of projects and programs? How can IA practitioners and decision makers establish better understanding and communication between each other?

Bridging knowledge to action in impact assessment

Janis Shandro, Gary MacDonald, Tim McLaughlin, Carol Odell, Zoe Mullard

This paper provides impact assessor's a process and associated tools for effectively communicating IA knowledge.

Effective Stakeholder Engagement in Wind Energy Project

Isolina Sánchez Andrade

The paper focuses on the importance and benefits of working in community-developer partnerships while analyzing the various aspects developer need to consider during the early planning stages of a wind energy project.

Role of EIA Practitioners: Challenges and Solutions

Abida Ayub, Nasim-ur-Rehman Shah

Lack of professional development opportunities, absence of coordination between EIA practitioners and the multi-stakeholder involved, the current lacking in the educational system has resulted in declined efficiency of EIA practitioners.

10.6 A new generation of regional transportation infrastructure development

Wednesday 15 May | 09:00-10:30 | Palomino A-C

Panel discussion

Chair(s): Ernesto Monter and Juan D. Quintero

Many ecologically and socially sensitive areas around the world are experiencing an unprecedented road and highway expansion to support plans for regional infrastructure integration and to support agriculture, timber, oil, gas, and mineral extraction. This forum will explore options for responding to this increased demand for transportation connectivity, including how new impact assessment practices and tools can contribute to a more systemic approach to regional and participatory planning for road development.

10.7 From IA to Sustainable Performance through Participatory Engagement and Capacity Building

Monday 13 May | 11:00-12:30 | Palomino A-C

Theme forum

Chair(s): Agnieszka Rawa, Fernando Rodriguez

How do we move from quality IAs to sustainable performance? Conveners will share examples of how two donors are contributing to more comprehensive stakeholder involvement and capacity building—and then guide the audience in exchanges of experiences and stimulate ideas on ways to get to the next generation of performance-based IAs.

Problem Statement: Early, proactive and strategic stakeholder identification and involvement is crucial to identifying potential risks and opportunities associated with proposed developments. However, insufficient capacity of local stakeholders may preclude them from effectively participating in decisions during the project planning and IA stage. In addition, to contribute to more sustainable outcomes, it is imperative to focus on following through on IA commitments—and the limited capacity and resources of regulatory agencies, particularly in developing countries, may hinder crucial post-IA monitoring and enforcement.

Welcome, Problem Statement and Session Structure

Primer / Example 1: World Bank-Sponsored Training on Environmental and Social Impact Assessment in African Oil and Gas Producing Countries

Fernando Rodriguez

Primer / Example 2: MCC Compact Development, Implementation and Capacity Building Framework

Agnieszka Rawa

Facilitated discussion

Summary and closing

10.8 Communication with stakeholders and the general public: From state-of-the-art to innovation

Tuesday 14 May | 16:30-18:00 | 100A

Paper session

Chair(s): Heikki Kalle, Lea den Broeder

The art of how difficult topics are communicated to the general public and particularly to the stakeholders is vital for the effective IA process. Based on several case examples, this session will discuss effective IA communication and dialogue, from the right psychological setup to the communication routines and means. Where are we now and where are we going next?

Public participation in EIA reports in Nigeria

Silas Agaja

EIA, public participation, FMENV, Smith Model, Nigeria.

Stakeholder involvement for radioactive decontamination

Takehiko Murayama, Yoshiaki Totoki, Hiroyasu Shioya

Activities within stakeholder involvement include regional dialogues on general issues, consensus-building on siting of potential facilities for radioactive wastes and on decontamination of each house in Fukushima.

Integrated approach to refine stakeholder analysis

Davi Rodrigues, Barbara Loureiro, Suellen Pereira, Rita Alves, Carla Sabino

How integrated information from different stages of several oil&gas licensing and permitting has been allowing improvements for the stakeholder analysis in Brazil with positive impacts at social communication projects?

DRAFT

IA OVER THE PROJECT LIFE CYCLE

11.1 Mine planning and environmental assessment (I)

Monday 13 May | 14:30-16:00 | Quarter Horse B

Paper session

Chair(s): *Alvaro Paredes*

Mining projects need to incorporate environmental and social guiding principles during the early stages of planning in order to produce a design outcome that would not only be acceptable by regulators and the community, but that would be feasible in economic and technical terms.

End in mind: Decision-scoping in mining EAs

Andrew Duthie

The efficacy of the concept of “Decision-scoping” as a means of directing mining environmental assessments is demonstrated.

Planning to conserve rare fishes within bauxite mines

Jason Willey, Carol Young, Herbert Pirela

A proposed mine in Suriname threatened several species of rare fish. The project proponent used the ESIA process to identify the potential mechanisms of impact and proactively address them.

Managing key impacts of large-scale mining in Ghana

Richard Kofi Afenu

Increased mineral production have caused increased environmental impacts. The paper reviews the critical aspects of environmental impact of these mining activities and discusses measures being taken to address them. HHRA:

Application of IFC's PS6 in ESIA's of mining projects

Claudia Valencia

Study aim: appraise the mining industry's performance in relation to IFC's PS6 and provide recommendations for future assessments. A checklist was applied to ESIA's to identify gaps and good/best practices.

11.2 Mine planning and environmental assessment (II)

Monday 13 May | 16:30-18:00 | Quarter Horse B

Paper session

Chair(s): *Alvaro Paredes*

Mining projects need to incorporate environmental and social guiding principles during the early stages of planning in order to produce a design outcome that would not only be acceptable by regulators and the community, but that would be feasible in economic and technical terms.

Quantifying risks of a proposed REM Mine

Michael Sanborn, James Phibbs

Quantification of human health risks prior to the initiation of a project can have a significant positive effect. The presented study identifies routes of exposure at a simulated mine site.

Advancing our collective understanding of caribou

Diane Martens

Collaborative initiatives to advance the understanding of caribou are consistent with the Inuit principle *Ikajutigiinni*: Working Together for a Common Cause and are leading to more informed decision-making for everyone.

Fly-in/Fly-out mining arrangements and regional development

Keith Storey

Fly-in/fly-out work arrangements in the mining sector are being challenged for their perceived adverse regional development impacts. This paper examines the issues and potential ways to address them.

11.3 Use and abuse of adaptive management in impact assessment: Where to next?

Tuesday 14 May | 16:30-18:00 | Palomino E

Workshop

Chair(s): *Kathleen Racher, Alan Ehrlich*

Adaptive management (AM) is seen as a panacea for any uncertainty remaining after impact assessments although true AM is not properly implemented during resultant projects. This session involves presentations and a panel to interactively discuss how the full potential of AM in impact assessment and project management may be realized.

EIA uncertainty: Barn owl and bat studies, BC, Canada

J. Charlie Palmer

This presentation will interest EIA practitioners and ecologists/biologists wishing to see the outcomes and applicability of adaptive management to address EIA approvals and ecological management challenges.

Linking EA to Environmental Regulation thru Adaptive Mgmt

Neil Hutchinson, Kathleen Racher, Don Hart, Ryan Fequet, Patty Ewaschuk, Mark Cliffe-Philips

A “Response Framework” is proposed as a systematic process to link EA predictions to the development of monitoring results and management actions in the subsequent regulatory process.

Panel discussion with above speakers as well as:

- Bill Ross
- Carol Murray

11.4 Partnerships over the project

lifecycle: the next generation for IA

Wednesday 15 May | 11:00-12:30 | Arabian C

Panel

Chair(s): *Jos Arts, Charlotta Faith-Ell, Ana Maria Esteves, Ilse Aucamp*

Applying “responsible and sustainable” concepts to the project lifecycle involves increasingly sophisticated partnerships between companies, governments, and communities. To this end, impact assessment plays an important role in informing and coordinating partnerships, which involves cradle-to-grave approaches and a range of instruments. In this expert panel discussion session, we will consolidate the strong interest in the topic evident from the last five IAIA conferences and take stock of international practice and principles of the role of partnerships in IA.

Partnering and IA: Best practice principles

Charlotta Faith-Ell, Jos Arts, Ana Maria Esteves, Ilse Aucamp

Applying responsible sustainable concepts to the project-lifecycle involves increasingly partnerships between companies, governments, communities. In this paper we consolidate the growing interest in this topic evident last five IAIA-conferences.

General discussion

Moderators: Jos Arts, Ana Maria Esteves

Wrap-up and Conclusions

Moderators: Ilse Aucamp, Charlotta Faith-Ell

11.5 Highway mitigation for wildlife: new insights for practitioners

Thursday, 16 May | 09:00-10:30 | 100A

Panel discussion and film screening

Chair(s): *Rachelle Haddock*

Environmental assessment as part of highway upgrades, expansion and maintenance requires specific mitigation to address wildlife movement and mortality. This session will focus on successful highway mitigation in Banff National Park and will specifically outline various mitigation options. The economic costs and benefits of highway mitigation will also be presented. The objective of this session is to provide practitioners with examples of successful mitigation and cost effective measures. This session dovetails with the technical visit to Banff National Park (wildlife management for TransCanada highway twinning and wildlife overpasses) led by Dr. Anthony Clevenger.

Banff highway mitigation: 30 years of learning

Anthony Clevenger

Research needs to be designed to inform management. An adaptive mitigation approach has been used in Banff National Park for highway mitigation design and planning.

Planning wildlife crossings in Canada's mountain parks

Trevor Kinley

Parks Canada plans to extend wildlife highway crossing infrastructure from Banff National Park into Kootenay and Yoho National Parks. New conditions and different species will be accommodated.

The cost dimensions of highway wildlife mitigation

Tracy Lee, Anthony Clevenger, Clayton Apps, Dale Paton, Mike Quinn, Dave Poulton, Rob Ament

In this case study we conducted a cost assessment of ungulate vehicle collisions occurring along Highway 3 to determine it is cost effective to invest in wildlife mitigation infrastructure.

Highway Wilding: a documentary film

Rachelle Haddock, Leanne Allison, Tony Clevenger, Danah Duke

This documentary film looks at the issue of highways, and some of the pioneering solutions that exist to prevent wildlife-vehicle collisions and reconnect landscapes across highways.

11.6 Operationalizing Impact Assessment: Follow up and implementation challenges

Wednesday 15 May | 14:30-16:00 | Arabian B

Paper session

Chair(s): Henry Camp

Reaching alignment on impact mitigation measures is a critical part of the planning phase of a major capital project. Mitigation measures are commitments to be upheld throughout the project's development and this session explores how projects manage the transition from planning to execution. The session will explore the various risks and issues and present approaches that have been successfully employed to drive real impact management.

EIA case study of implementing mitigation measure in HK

NH Mable Chan, TS Steve Li

The EIA Ordinance is a landmark legislation that marks a major step forward in environmental protection in Hong Kong, using Environmental Permits to implement mitigation measures recommended in the EIA.

Highway mitigation in Mexico, from planning to execution

Norma Fernández Bucos, Ricardo Sánchez Maldonado, Viridiana Lizárraga Gárate, Joel Demetrio Martínez, Sergio López Noriega

Mitigation is usually described in general, making it difficult to define specific actions;

therefore their implementation is a challenge. Creative low cost measures were used in a highway in Mexico.

Completing mitigation at US customs land ports of entry

Paula Bienenfeld

U.S. Customs and Border Protection successfully implemented protection and mitigation measures into Port Modernization construction projects using teamwork, early identification of environmental goals and continued management through the projects' lifecycles.

Performance of EIA in Ghana

Arend Kolhoff, Ebenezer Kwabena Appah Sampong

The performance of the EIA system and the environmental compliance and enforcement system in Ghana was evaluated. EPA will respond to the results and present first thoughts for improvement.

11.7 IA sustainable infrastructure and construction

Thursday 16 May | 09:00 - 10:30 | 100B

Paper session

Chair(s): Juan Quintero (to continue)

Session description

DRAFT

Decision-making for Navigation and Sustainability

Larry Canter, Tom Swor

This presentation will describe how systematic decision-making can be used to evaluate, both individually and in combination, both navigation-related and ES-related alternatives.

Adaptability of Eco-Measures in Highway Construction

Xuhui Shen, Wei Zhou

The paper focuses mainly on the environmental issues related to the highways in Xinjiang during the construction period.

Protection Zone of Construction Project

Shu Yan, Yi Su

Environmental protection zone is a more comprehensive concept taking account of not only the traditional elements like atmosphere, health elements but also the accumulated impact of contamination in the soil.

Synergy of EIA, LCA, LCCA and Energy Atlas

Marija Stamenkovic, Johann Köppel

The idea behind this research is an establishment of a framework that incorporates eco-efficiency (EIA, LCA, LCCA), with energy efficiency (Energy Atlas) for the building project during its whole life.

EIA Implementation during Construction of CWB

Mohamed Hasan ISA, Cheuk Fung Lam

Implementation of a comprehensive EM&A Programme with stringent environmental control measures in accordance with EIA requirements for the construction of Central – Wan Chai Bypass and Island Eastern Corridor Link.

BIODIVERSITY AND IA

12.1 Tools to predict impacts of economic development projects on biodiversity

Wednesday 15 May | 11:00-12:30 | Palomino D

Panel

Chair(s): Dennis Grossman

IAIA Section: Biodiversity and Ecosystems

This session will review baseline information and spatial analytical tools that are available to evaluate the impacts of economic development projects to biodiversity. The session's objective is to ensure a broader understanding of the data resources and tool functionality to promote their appropriate use across the environmental impact assessment community.

Dennis Grossman, Data Basin

Not registered, No abstract submitted

Martin Sneary, IBAT

Not registered, No abstract submitted

Neil Cox, IUCN

Not registered, No abstract submitted

Melissa Tolley, UNEP-WCMC

Not registered, No abstract submitted

Critical habitat assessment using IFC PS6 criteria

Carol Stefan, Christine Robichaud, Kyle Knopff, Darrin Nielsen, Corissa Carveth, Derek Melton,

An approach for designating critical habitat for fauna, flora and aquatic resources in a high biodiversity area following the five criteria outlined in IFC PS6 and GN6.

Protecting rare animals through the EIA Process: Hong Kong

Mark Shea, Vincent Liu, Samuel Chan

Hong Kong EIA process plays a role in preservation of natural habitats and wild life. This paper presents two drainage projects demonstrating a way to achieve protecting targeted animals.

Biodiversity-inclusive impact assessment in the depths

Robin Warner

Potential new elements of a biodiversity inclusive impact assessment process for deep seabed mining include monitoring processes, stakeholder consultation options, possible mitigation measures and implementation of a mitigation hierarchy approach.

Concurrent sessions

12.2 Addressing Project Impacts to Biodiversity: Critical Roles for IAIA

Monday 13 May | 16:30-18:00 | Palomino E

Panel

Chair(s): *Dennis Grossman*

IAIA Section: Biodiversity and Ecosystems

IAIA should provide leadership the appropriate use of data, tools and methods for assessing and addressing biodiversity impacts. A special IAIA Biodiversity Workshop in February identified many of these biodiversity assessment practitioners needs. This session will review these findings and lay out a future biodiversity leadership path for IAIA.

Dennis Grossman, Conservation Biology Institute

Not registered, no abstract submitted

Ernani Pilla, InterAmerican Development Bank

No abstract submitted

Culture ecosystem service by subjective value study

Kii Hayashi, Yasuhiro Hasegawa

The purpose of this study is to examine how to evaluate cultural ecosystem services (CESS) by a subjective value assessment method. A case study was done in Aichi, Japan.

Mitigation Hierarchy for Biodiversity Conservation

Pablo Taborca, Carolina Casaretto

PERU LNG implemented a mitigation hierarchy approach to protect biodiversity. Based on research findings, science-based monitoring and repeated assessment; managed to avoid, minimize and restore some negative impacts on biodiversity.

Study on biodiversity measuring method for Japanese

Yasuhiro Hasegawa, Kiichiro Hayashi

Several biodiversity assessment methods from other countries were tested for checking the applicability of urban secondly forest as a case study in Nagoya city, Japan.

New Approach to Assess Cumulative Effects on Biodiversity

Jim Schieck, Amit Saxena, Tyler Muhly, Dave Huggard, Peter Solymos, Daiyuan Pan, Erin Bayne

Biodiversity assessment needs to provide information that can be incorporated into planning and management decisions. We piloted methods to predict changes in species/biodiversity abundance and to map these changes spatially.

CLIMATE CHANGE, ADAPTATION, AND IA

13.1 INTEGRATION OF CLIMATE CHANGE AND IA

13.1.1 IA and climate change next steps: 2013 and beyond

Monday 13 May | 14:30-16:00 | Palomino F-H

Roundtable

Chair(s): *Weston Fisher, Lone Kornov, Will Knowland, Rita Cestti, Arend Kolhoff, Stephen Hazell, Peter Croal*

IAIA Section: Climate change

This roundtable will use the "IA and Climate Change Next Steps" document as the starting point for discussing accomplishments to date, constraints to more effective action, and how we might best apply the power of our Association and our members to respond to the great challenges before us over the next fifty years. The results of the roundtable will serve as the foundation for an updated "IA and Climate Change Next Steps" document.

13.1.2 Guidelines and tools for integrating climate change in impact assessment

Wednesday 15 May | 14:30-16:00 | Palomino F-H

Paper session

Chair(s): *Sanne Vammen Larsen, Patrick Driscoll*

IAIA Section: Climate Change

The session shifts focus from discussing relevance and status of integration of climate change in IA to reviewing examples of specific integration of climate change in IA in practice. The session through the papers presented covers both different tools and different sectors.

Climate change in EIA: Inspiration from practice

Sanne Vammen Larsen

On the basis of a Danish study, the paper presents approaches to integration of climate change in EA and tools for use in the various stages of the EIA procedure.

Abstract no. 206. Lisa Poon. Factoring climate extremes into EIAs.

Scenario analysis for mitigating climate change impacts

Ronni Wilcock

Development of sustainable resource management decisions that integrate the dynamics of aquatic, marine, and terrestrial ecosystems to minimize the environmental, social and business risks of climate change through scenario analysis.

Carbon market mechanisms: Oil and gas sector

Tyler Tarnoczi

Comparing the various carbon market mechanisms that affect Canada's oil and gas industry shows diverse approaches to project

additionality, crediting, and quantification methodologies.

Comparative study of inundation vulnerability

Sun-Ryong Ha, In-Hyeok Park, Jeong-Young Lee

This study is to notice the difference of urban inundation vulnerability by four evaluation methods. The vulnerability maps have been obtained and then compared.

13.1.3 Crisis? What crisis? Decision-makers and climate change adaptation

Wednesday 15 May | 16:30-18:00 | Mustang

Paper session

Chair(s): *Patrick Driscoll*

IAIA Section: Climate Change

This session focuses upon how decision-makers handle the implementation of adaptation measures and identifies what can be done to make scientific information in EIAs and SEAs more comprehensible. Empirical work is presented from rural infrastructure projects in developing countries, and urban contexts in Russia, Denmark, and the US.

Distal and proximate risk: Danish and American planners respond to the climate adaptation challenge

Patrick Driscoll

Summary statement needed.

Practical adaptation for rural infrastructure projects

Kenneth Green

Rural infrastructure projects are being implemented in developing countries with increasing policy attention to climate adaptation but little evidence of practical implementation. This paper will show useful field based approaches.

Climate change adaptation in St. Petersburg

Martin Lund-Iversen

St. Petersburg still has a way to go to incorporate data relevant for adaptation to climate change into planning and development consents.

13.1.4 IA for integrated resource management in a climate-stressed world

Tuesday 14 May | 11:00-12:30 | Palomino F-H

Paper session

Chair(s): *Jean Hugé*

IAIA Section: Climate Change

IA in support of integrated resources management holds the promise of promoting a much-needed transition to sustainability, yet

climate change brings on new challenges that IA practitioners and users can no longer ignore. But what works and what does not, and what can we learn from recent experience?

Above the theory, below the practice

Marija Stamenkovic, Johann Köppel

In this paper, the link between corporate and environmental stewardship is going to be presented through impact assessment examples of procurement.

LCA of novel bio-products processing and production

Emmanuel Yiridoe, Qiaojie Chen, Rodney Fry, Derek Lynch, Gordon Price

Results of the environmental impact and economic analysis are useful for potential entrepreneurs contemplating investing in the novel bioproducts processing and production.

IA for climate-proofing development: what kind of change?

Jean Hugé, Tom Waas, Francisco Benitez-Capistros, Elvis Nkoana, Aviel Verbruggen

The broader influence of IA on climate proofing development cooperation is analyzed by applying the policy arrangement approach on recent IA cases in Belgium, Ecuador and South Africa.

Impact of climate change on environment, Aibi Lake Basi

Yibing Qian, Yibing Qian, Zhaoning Wu

Under the background of global climate warming, the climate of Aibi Lake Basin shows remarked variation, which results in advantageous and disadvantageous impacts on the eco-environment of Aibi Lake Basin.

Climate Change Considerations—Illustrations from EISs

Larry Canter, Pam Hudson

Climate change should be addressed within local to regional CEAM studies. GHG emission inventories, effects of climate change in spatial areas, and mitigation and adaptation will be described.

13.1.5 Strategic environmental assessment and climate change

Tuesday 14 May | 16:30-18:00 | Quarter Horse B

Paper session

Chair(s): He Xu, Kin Che Lam

This session will provide practical guidance on the planning, design and operation of PPP with climate change considerations in mind. The discussion will cover a wide range of sectors including land use, regional and urban development, industry, agriculture, livestock breeding, forestry, energy, water conservancy, transportation and tourism.

EA for climate change: New scope, new challenges

Kin C. Lam

In future, more and more IAs will touch on

climate change. The paper reviews the changing scope/nature of the issues involved and the need for a new paradigm of assessment.

Climate change, environmental disasters, and poverty nexus

Saqib Ejaz Hussain, Mirza Arshad Ali Beg, Syed Nadeem Arif

Results of the SEIA study of the two Ramsar sites will be presented to elucidate the point that climate change and anthropogenic activities are responsible for environmental and social pollution.

Challenges to integrate CC considerations in EIA

Prasad Modak, Namrata Ginoya

There is a need to evolve an integrated approach, combining project and regional level considerations, to address climate change in EIA.

Intergated low carbon development into SEA process

He Xu, Hongtao Bai, Wenchao Li, Nan Zhang

Explore how to intergate low carbon development into the SEA process in China.

SEA, Climate Change and Hydropower for Sustainability

Raja Aurangzeb Khan

An analysis of environmental governance, vulnerability to climate change; comparing two approaches for introduction/legalization of SEA in the national development planning process for sustainability through SEA of hydropower plans/programmes.

Strategic EIA of a thermal power complex, Vietnam

Genandrialine Peralta

A strategic EIA was undertaken with vulnerability to climate change on the whole thermal power complex despite that only one of the five plants is being financed by the ADB.

13.2 CLIMATE CHANGE: NORTH AND SOUTH PERSPECTIVES

13.2.1 The vanishing North: Can impact assessment reverse the trend?

Monday 13 May | 11:00-12:30 | Palomino F-H

Theme forum

Chair(s): Arend Kolhoff, Patrick Driscoll

IAIA Section: Climate Change

The Arctic countries are already experiencing the impacts of climate change. Those impacts are influencing daily life of people, investments and biodiversity. Each speaker will take a perspective aiming to get an overview of the impacts of climate change and how impact assessment can assist to mitigate and adapt to those changes and what the rest of the world can learn from the first experiences gained by the Arctic countries.

Panelists:

- **Stephen Lintner**, World Bank

- **Stephen Hazell**, Canada
- **Peter Croal**, Canada

13.2.2 Climate change and impact assessment: The North meets the South

Monday 13 May | 16:30-18:00 | Palomino F-H

Paper session

Chair(s): Arend Kolhoff, Jonathan Allotey

IAIA Section: Climate Change

The Arctic countries are already confronted with the impacts of climate change for some time. This session facilitates the exchange of lessons concerning how to deal with climate change in impact assessment between the practitioners from the countries in the North and the South.

Greenhouse gases in environmental impact assessment

Mike Murphy, Karen Gillam

There is very little guidance available on how to assess the release of greenhouse gases from a project. New ideas are presented based on recent assessment experiences.

Ensuring safe water for the future: Lessons from US

Hope Herron, Charlie MacPherson

This presentation explores how to incorporate climate risk management, resilience, and adaptation into environmental assessments that involve water utilities and water resources.

Climate change and Arctic tourism in Svalbard

Marina Martin Curran, Yvette Evers

We present research on the impact of climate change (unpredictable weather and seasons) on tourism actors in the Arctic archipelago of Svalbard and how the industry is having to innovate.

Challenges of climate risk assessment in Central Asia

Charles Kelly, Yegor Volovik

The paper focuses on how to work around poor and limited data to accomplish a climate impact risk assessment, with experiences in Central Asia used to define the problems encountered.

13.2.3 The Arctic

Wednesday 15 May | 14:30-16:00 | Quarter Horse B

Paper session

Chair(s): John Aronson, Bob Clark, Viktor Raykin, John Winston

The Arctic is in a state of rapid change. IAIA needs to step up with modern interdisciplinary approaches for effective ESHIA, especially for the oil and gas, mining, fishing, and other commercial exploitation industries. The Arctic is melting quickly: on August 27 we reached the all-time least Arctic ice cover, and normal minima are not reached until September. The linkages and networks concerned with Arctic ecology and environment will be elaborated.

The rapidly-changing Arctic:

Concurrent sessions

Challenges for ESHIA/SEMMP

John Aronson

The physical, chemical, biological, social, regulatory, and engineering complexities of the rapidly changing Arctic must be understood for effective ESHIA and SEMMP development.

SEA opportunities and constraints in the western Arctic

Bram Noble, Courtney Fidler

SEA remains uncharted territory in Canada's western Arctic. The perceived risks of foregoing development and adding regulatory complexity create much uncertainty around SEA and outweigh its perceived benefits.

Addressing Arctic Aspirations

Mark Shrimpton

The paper reviews, and discusses best practice responses to, the aspirations and concerns of Arctic peoples related to upstream petroleum industry activity.

Assessing cooperation in Arctic tourism on Svalbard

Yvette Evers, Marina Martin Curran

Results are presented on tourism cooperation in the Arctic archipelago of Svalbard and how this is affected by both internal and external changes in the last five years.

Community Participation and Influence in an Arctic EA

Diane Martens

Using EA and an iterative approach to project design to select road alternatives that best consider the terrestrial and socio-economic environments, traditional knowledge, and community preferences while meeting Project needs.

Governance and EA capacity building in Canada's Arctic

Michael Mifflin, Tomasz Wlodarczyk

This paper presents a model for governance and capacity building for environmental assessment in the Canadian Arctic, drawn from a three year initiative in the Nunavut public service.

DRAFT

SOCIAL IMPACT ASSESSMENT

14.1 Voluntary SIA: Ideas and Insights from beyond a regulatory context

Monday 13 May | 16:30-18:00 | Arabian C

Panel discussion

Chair(s): Christine Crispin

IAIA Section: Social Impact Assessment

What is happening with SIA outside the regulatory planning context? What does this mean for the evolution of SIA practice? In this Q&A session we will explore and challenge different approaches to voluntary assessment of social impacts in resource development across the project lifecycle, from planning through operation to closure.

Christine Crispin

An overview of voluntary SIA practice in the resources sector, including results of a research project reviewing the requirements for SIA and related activities within the Social Responsibility and Performance Standards of major resource companies.

Rhonda Zuraff, External Relations Manager – North America, Newmont

Experience managing an SIA process for a proposed mine in North America that was delivered to meet both regulatory and company standards, with a particular focus on management of impacts relating to water.

Bill Kruse, Principal, Banarra

Experience delivering SIAs and other assessments focused on identifying and managing the social impacts of existing mining operations in Australia, with a particular focus on management of impacts on Indigenous Peoples and Cultural Heritage.

Diana Arbelaez-Ruiz, Research Manager, Centre for Social Responsibility and Mining, University of Queensland

Experience delivering and supporting closure impact studies for two Australian mining operations and the learnings for improving SIA practice in relation to closure.

14.2 Social Impact Assessment Clinic

Thursday 16 May | 09:00-10:30 | Arabian C

Facilitated clinic

Chair(s): Frank Vanclay, *Ilse Aucamp, Ana Maria Esteves (not confirmed), Daniel Franks, Rauno Sairinen*

IAIA Section: Social Impact Assessment

For many SIA practitioners IAIA conferences are a clinic where we re-energize and focus on the health of our own practice and the field as a whole. This workshop will be a space for new

and experienced SIA practitioners to hear about and share practical experiences, innovations, anecdotes, tips and techniques.

14.3 SIA and CSR in the mining and energy sectors: A merging of generations?

Monday 13 May | 11:00-12:30 | 100A

Theme forum

Chair(s): Rauno Sairinen

IAIA Section: Social Impact Assessment

SIA and CSR are both used by companies in the mineral and energy sectors to assist their community relationships. This paper session invites case studies and practitioner reflections on the current state of the art of these distinct bodies of practice and how they are informing each other to address social issues across the life-cycle of projects.

Towards meaningful cohesiveness: Bridging CSR and SIA

Sara Bice

CSR and SIA share core values, yet often remain separate. Research and case experiences help explain frequent gaps between CSR and SIA and offer insights for achieving “meaningful cohesiveness.”

SIA and CSR for management of stakeholders expectations

Didas Muhumuza, Florence Nangendo

Uganda has had tremendous success in petroleum exploration so far but this has also come with numerous lessons. Stakeholders expectations are also immense and have to be managed effectively.

Beyond CSR: A standards-based approach

Ben Dixon, Ramanie Kunanayagam, Shane Boladeras

Presents a case study from an international energy company that has moved beyond a CSR approach to embed social performance standards and management systems in a mandatory control framework.

How rural communities experience new mining sites in Finland

Tuija Mononen

Mining industry is a highly diverse actor. The local consequences of mining operations are often stronger than in other fields of industry.

14.4 SIA and CSR in the mining and energy sectors: A merging of generations?

Monday 13 May | 14:30-16:00 | 100A

Paper session

Chair(s): Daniel Franks

IAIA Section: Social Impact Assessment

SIA: Pushing the boundaries of conventional assessment

Linda Havers, Natasha Kone, Haukur Bjornsson

Social assessments of large projects are often expected to include other special assessments such as human rights, health and cultural assessments. What is the role of the SIA practitioner today?

Can we predict with tourist opinions?

Mikko Jokinen, Liisa Tyrvaänen

Assessments are based in best cases on research. Typically we study people's opinions on possible impacts. The fuzziest the implementation of projects is, the less useful are the results of the study.

Theoretical contributions to local procurement practice

Evandro Moretto, Marcelo Montaño, Daniel Roquetti

Review of economic development theories in order to search for contributions to local procurement practice.

14.5 International Guidelines for SIA: The next generation

Monday 13 May | 14:30-16:00 | Arabian C

Workshop

Chair(s): Frank Vanclay

IAIA Section: Social Impact Assessment

This workshop will further develop the “International Guidelines for Social Impact Assessment.” The concept will be presented for feedback (draft document available in advance from Frank.Vanclay@rug.nl). The workshop will comprise group discussions to elaborate the key points needing improvement. Input from people interested in SIA and/or social development is invited.

14.6 Community responses to the next generation of energy technologies

Thursday 16 May | 09:00-10:30 | Quarter Horse B

Paper session

Chair(s): Francesca Vilianni, Daniel Franks

IAIA Section: Social Impact Assessment

The global energy mix is shifting and with this change new community, social and health challenges have arisen. This paper session explores the role of impact assessment in assisting communities to understand the unfamiliar and proponents to respond to community concerns at the local level. The session traverses “green” and unconventional energy technologies including, biomass, wind

Concurrent sessions

and oil sands.

Adverse impacts of Alberta's intensive energy production

Michael Edelstein

Two instances highlight current practice in Alberta for dismissing adverse community impacts in decisions to permit energy production projects. In both, evidence was collected and testimony presented. Future citizen intervention is discouraged.

Factors influencing conflict occurrence over wind farm

Keita Azechi, Shutaro Hori, Shigeo Nishikizawa, Takehiko Murayama

This presentation clarifies factors influencing occurrence of environmental conflict in Japanese context by applying quantitative method including multivariate analysis to over one hundred onshore large-scale wind farm projects in Japan.

Socio-economic assessment of bioenergy projects

Rocio A. Diaz-Chavez

This paper presents the results of different bioenergy projects assessing socio-economic impacts and how to deal with them in practice and improve policy in the renewable sector

Perception and annoyance due to coastal wind turbines

Shigeo Nishikizawa, Tatsuki Mitani, Takehiko Murayama

This presentation clarified the perception and annoyance due to wind turbines located in coastal area according to interview surveys with inhabitants and questionnaires to local governments.

14.7 Impact of dams on communities: Lessons learned and the future role of SIA)

Wednesday 15 May | 16:30-18:00 | Palomino D

Workshop

Chair(s): Eram Aftab Gaia, Monte Alves (to be confirmed)

IAIA Section: Social Impact Assessment

The World Commission on Dams estimates that 40-80 million people have been displaced by construction of dams, and WCD reports highlight how displacement leads to landlessness, joblessness, increased morbidity, loss of social and cultural resilience, and often-irreversible declines in living conditions. With the new wave of dams being proposed in developing countries, there is a need to revisit the social impacts and the how the EIAs of these development projects are incorporating the WCD recommendations. Following two brief presentations, participants in this session will prepare a list of recommendations for inclusion in SIA practice on displacement of communities in mega projects.

Impact of dam on social structure and environment

Haider Raza, Shazad Hassan

The paper will discuss the gaps in current EIA practices in Pakistan regarding construction of a mega dam in the context of socio-political and

cultural values in the project area.

14.8 The impact of new transportation facilities on urban gentrification: The case of Metro de Quito

Wednesday 15 May | 11:00-12:30 | Quarter Horse B

Panel

Chair(s): Carlos Perez Brito

As Latin American cities modernize their transportation systems, one phenomenon that hasn't been sufficiently analyzed is the impact of infrastructure on gentrification, and the dynamics of improvements and displacement. This session will discuss the analysis developed that integrates mobility, buildings, and census data to analyze the impact of the metro.

Panelists

El Metro de Quito. Design and engineering

Patricio Romero

Sustainable transport and urban development in Latin American cities

Rafael Acevedo

Social analysis with geo-reference data for the Metro de Quito

Carlos Perez-Brito

PUBLIC PARTICIPATION

15.1 Public participation, value conflict, and the politics of impact assessment (I)

Tuesday 14 May | 14:30-16:00 | Palomino A-C

Paper session

Chair(s): *Louis Meuleman*

IAIA Section: Public Participation

This session presents papers exploring the dynamics of values and politics in IA. Public participation has gained ground but projects continue to put economic valuations foremost while social and environmental concerns are given secondary consideration and many stakeholders feel marginalized. This session presents cases from Peru, Australia, the Pacific, the Philippines, Canada, and Chile.

Politics and institutions in mining EIS approvals

Diana Carolina Arbelaez-Ruiz, Juan Mauricio Benavides

This paper proposes a framework to analyse the political and institutional dimensions of mining EIS approval, explores two Peruvian EIS approval cases, and suggests criteria for regulatory improvement.

Reclaiming balance when economics dominate

Alexandra Blood, Charlie Wilson-Clark

This paper considers social political implications when economic based decision making fails to acknowledge stakeholder participation in all phases of mining with case studies from Pacific, Africa and Australia.

CSR in the context of poverty and inequality

Nonita Yap, Kerry Ground

This paper presents the results of a study seeking to understand the challenges and opportunities faced by Canadian mining companies in the Philippines for improving their social and environmental performance.

EIA substitution: Experiences of public participants

John Sinclair, Gary Schneider, Lisa Mitchell

This presentation explores the experiences of participants in a regulatory process that substituted a Federal EIA process to gauge the impact of such process substitutions on meaningful public participation.

Ethics and sociocultural impact assessment

Pablo Rossel

This paper analyzes the current state of applied investigative ethics linked to socio-cultural assessment in Chile in different areas of development, including energy, mining, and transportation, among others.

15.2 Public participation, value conflict, and the politics of impact assessment (II)

Tuesday 14 May | 16:30-18:00 | Palomino A-C

Paper session

Chair(s): *John Devlin*

IAIA Section: Public Participation

Public participation in IA promises improved governance but its practice often falls short of expectations. This session explores the governance potential of IA, difficulties in creating fully participatory IA processes. This session explores evolving governance practices in Hong Kong, Canada, Greenland and Japan and assesses whether recent changes are likely to improve the capacity for better public participation in each country.

The governance dimension of IA

Louis Meuleman

Impact assessment is an essential part of governance but also depends on appropriate governance. Improving the compatibility of IA approaches with their governance environment leads to better assessment processes.

Amplifying vocal minority views in public participation

Timothy J. Peirson-Smith

This paper highlights inadequacies in conventional Public Participation exercises to demonstrate how vocal minorities dominate dialogue and reviews strategies and tactics to counter and capture silent minority opinion towards consensus.

The Canadian EA Act 2012 and Public Participation

Katherine Kung

This paper evaluates the new Canadian Environmental Assessment Act, 2012, and discusses the implications for public participation in light of the recent changes to the federal environmental assessment legislation.

Public participation within the oil exploration sector

Anna-Sofie Olsen, Anne Merrild Hansen

The communicative aspects of public participation within EIAs and SIAs in relation to the oil exploration activities in Greenland.

Positive changes after the Great East Japan Earthquake

Yoichi Kumagai

This presentation analyses policy documents for recovery from the catastrophic effects of the Great East Japan Earthquake. A framework of sustainability assessment is applied to find positive changes.

15.3 Next Generation Social Media Tools for Enhancing Public Participation in IA

Monday 13 May | 14:30-16:00 | Quarter Horse C

Paper session

Chair(s): *Gwen Brice*

IAIA Section: Public Participation

This session will present new social media tools that can enhance public participation in IA. The

potential of social media to collect and disseminate information and to mobilize the public is well recognized. But the potential of online data continues to expand.

Benefits and pitfalls of using SM tools in PP programs

Gwen Brice

An introduction to the benefits and pitfalls of using social media tools in public consultation programs.

Gamification of environmental impacts in digital media

Andy Chung, Wanxin Li, Wai-Ming To

Discusses, with case studies in Hong Kong, the opportunities and benefits of environmental issues gamification in digital media to raise green awareness for the next generation.

Q-cumber: The Environmental-Social Network for IA

Giuseppe Magro, Ernesto Pirillo, Miguel Coutinho

Q-cumber, the environmental GoogleMaps based Social-Technical Network for Impact Assessment, is growing its influence on governments, institutions and universities with new Applications for SEA, EIA and environmental planning.

15.4 Public participation in IA follow-up

Wednesday 16 May | 16:30-18:00 | Quarter Horse C

Paper session

Chair(s): *Mark Kunzer*

IAIA Section: Public Participation

This session discusses IA follow-up monitoring and auditing. It considers examples of follow-up programs in Hong Kong, Nunavut, and Newfoundland and Labrador featuring regulatory and community-based monitoring and stresses the importance of public participation in conceptualizing follow-up programs given the documented incentives of project proponents to misestimate project outcomes.

EIA Implementation during Construction of CWB

Mohamed Hasan Isa, Cheuk Fung Lam

Implementation of a comprehensive EM&A Programme with stringent environmental control measures in accordance with EIA requirements for the construction of Central – Wan Chai Bypass and Island Eastern Corridor Link.

Community engagement in Canada's Arctic

Gustavo Oliveira, Dianne Lapierre

Community engagement in Canada's Arctic: Nunavut's multi-stakeholder, participatory approach to socio-economic monitoring.

Public participation and big projects in remote places

John Devlin

This paper discusses the systematic misestimation of costs and benefits of resource mega-projects in Canada. What does systematic misestimation imply for public participation in project assessment and follow-up?

STRATEGIC ENVIRONMENTAL ASSESSMENT

16.1 Experiences with different types of SEA: From legislation to big projects (I)

Tuesday 14 May | 14:30-16:00 | Palomino F-H

Discussion session

Chair(s): Thomas Fischer

The session aims at determining whether the establishment of a more systematic approach to SEA is possible, based on empirical evidence gained from applying the instrument to different decision making situations or decision tiers.

SEA: Endogen process or control procedure?

Giorgio Baldizzone, Carlo Rega

Different regional/national SEA laws in land use planning lead to opposite approaches: endogen process or control procedure. The Genoa's new urban plan is an opportunity to understand this issue deeply.

Possible SEA adoption and application by corporations

Steve Bonnell

This paper explores the potential use of SEA in corporate strategic planning, including organizational decision-making around whether, why and how to voluntarily adopt and apply SEA.

Lessons from SEA experience in Australia

Carolyn Cameron, Mary Colevray

The number of SEAs in Australia has doubled in the past two years as land managers recognise the value of up front certainty and communities seek regional, landscape- scale outcomes.

Sustainability indicators: Planning ethanol by SEA

Amarilis Lucia Casteli Figueiredo Gallardo, Tania Oliveira Braga, Carla Grigoletto Duarte, Caroline Almeida Souza, Maria Lucia Solera, Wellington Gomes dos Santos, Ana Clara Cerminaro, Ana Paula Souza Silva, Ana Paula Dibo

An SEA framework to guide the expansion of sugarcane for producing ethanol composed by eight steps that resulting in 44 environmental indicators was tested in a threatened watershed.

16.2 Experiences with different types of SEA: From legislation to big projects (II)

Tuesday 14 May | 16:30-18:00 | Palomino F-H

Discussion session

Chair(s): Thomas Fischer

The session aims at determining whether the establishment of a more systematic approach to SEA is possible, based on empirical evidence gained from applying the instrument to different decision making situations or decision tiers.

Use of EA by the Canadian offshore petroleum boards

Kimberley Leach, Peter Morrison

This paper will summarize the key findings from an audit related to the use of environmental assessment by two offshore petroleum boards in Atlantic Canada.

SEA for master plan studies: JICA's Experiences

Kiyoshi Masumoto, Shimako Takahashi, Aiko Ueda

Experiences of SEA for master plan studies in developing countries conducted by JICA to date are reviewed and some ideas for further improvement are presented.

SEA experiences in the Mexican electricity sector

Luis E. Montañez-Cartaxo, Francisco J. Díaz-Perea

The lessons learned from the implementation of SEA in the Federal Commission of Electricity are presented along with a scheme for incorporating environmental issues in the company decision processes.

A comparative study of the SEA system in Brazil

Marcelo Montañó, Priscila de Almeida Oppermann, Anne Caroline Malvestio, Marcelo Pereira de Souza,

The Brazilian SEA system is compared to other 7 countries whose systems are in different stages of evolution.

SEA issues in Portuguese and Scottish small islands

Alexandra Polido, Elsa João

Territories with specific features may need specific SEA approaches; an analysis of the SEA in two different contexts of European small islands was accomplished identifying their main features and differences.

16.3 Using SEA for effective development planning

Monday 14 May | 14:30-16:00 | Mustang

Paper Session

Chair(s): Cary Anne Cadman

IAIA Section: Strategic Environmental Assessment

The session aims to promote adoption of SEA as an effective tool to mainstream environment into development planning at the national level. The expected outcome of the session is improved understanding of when and how to use SEA as an upstream planning tool to effectively manage environmental and social risks associated with development interventions across sectors at the national level.

Cumulative impacts: Public and private sector challenges

Reisha Hartley, Ross Mitchell

This session will present two case studies of rapidly growing resource-rich regions in Australia and Alaska comparing approaches to addressing energy, water, infrastructure and accommodation challenges.

SEA of a regional transmission development: Mozambique

Adriana Lafleur, Stephen Lindley

A case study using SEA for the sustainable planning of a regional power generation and transmission development in Central and Southern Mozambique.

Analysis of the application of SEA in transport plans

Nini Luferly Castillo Soto, Marcelo Pereira de Souza

This analysis contributes subsidies and recommendations of the SEA of PTs that could be implemented in the National Plan of Logistics and Transport (PNLT) of Brazil.

Lost assessment integration in Maptaput city planning

Paranee Sawasdirak

The study of Maptaput city plan in Thailand proposed assessment integration in regional and city planning both vertical planning process and horizontal participatory network involvement for well-mixed sustainable landuse zoning.

SSA and strategic sustainability planning

Tanya Markvart

I investigate how SSA and strategic sustainability planning (SSP) might influence each other, especially with respect to addressing implementation and social change towards sustainability requirements.

16.4 Using SEA for effective development planning (II)

Monday 13 May | 16:30-18:00 | Mustang

Paper session

Chair(s): Cary Anne Cadman

IAIA Section: Strategic Environmental Assessment

The session aims to promote adoption of SEA as an effective tool to mainstream environment into development planning at the national level. The expected outcome of the session is improved understanding of the theoretical underpinnings and application of SEA as an upstream planning tool to effectively manage environmental and social risks associated with development interventions at the national level.

Nigeria: The next generation environmental assessment

Edward Bristol-Alagbariya

Emerging trends in EA have the potential to sensitise Nigeria to formally introduce and institutionalise SEA and generic Strategic Assessment (SA), for purposes of effective and sustainable development planning.

Paradigm change from EIA to SEA in developing countries

Nimi Dan-Jumbo, Marc Metzger

For the next generations IAs, the introduction of SEA and application of integrated impact assessment (IIA) model approach can help improve performances reduce imbalances across developed and developing countries.

Assessing cumulative impacts: An emerging frac'ing play

Alan Ehrlich, Simon Toogood, Shannon Hayden, Carol Luttmner

This paper examines an approach to assessing the cumulative impacts of an emerging regional hydraulic fracturing ("frac'ing") unconventional gas play in a project-specific EIA framework in Canada's Northwest Territories.

SEA process of sustainable island tourism development

Sangbum Lee

This study clarifies the current problems of the island tourism development and suggests strategies to enhance the environmental sustainability of the island tourism development.

SEA and Pakistan - An Experience worth replicating

Ahmad Saeed, Abdul Hamid Marwat

Under NIAP, Government of Pakistan in collaboration with IUCN, is working towards the integration of SEA in national development planning through awareness raising, institutional strengthening and development of legal frameworks.

16.5 Strategic Environmental Assessment in Marine and Coastal Planning

Wednesday 15 May | 14:30-16:00 | Quarter Horse C

Paper session

Chair(s): Amanda Chisholm

IAIA Section: Strategic Environmental Assessment

Marine and coastal management both seek to manage the cumulative impacts of human activities, to facilitate continued delivery of ecosystem services. An ecosystem approach has been recently advocated, which overlaps with SEA and EIA. This session will share experience of marine and coastal planning and assessment so far.

SEA and marine planning in Scotland

Amanda Chisholm

The draft National Marine Plan for Scotland will be subject to sustainability appraisal. This paper describes the planning and appraisal process, and discusses challenges, solutions and lessons learned to date.

The determining effects of land use on coastal areas

Nermin Merve Baykan, Nuriye Say

The main objectives in this study, to determinate and analyze land use changes on coastal areas in Izmir- Seferihisar which is located on the Aegean

coast of Turkey.

16.6 Added value of SEA

Wednesday 15 May | 11:00-12:30 | 100B

Paper session

Chair(s): Maria Partidário, Jan Nuesink

IAIA Section: Strategic Environmental Assessment

In this session we ask: (1) How can SEA more explicitly consider and communicate how it can add value in any specific context? (2) Assuming that integration into decision-making leads to more effective SEAs: What should integration practically involve, and what are the preconditions to improve SEA effectiveness?

Five years' experience with SEA in Portugal

Maria Partidário, Margarida Monteiro

The effectiveness of the Portuguese methodological guidance to ensure innovative, environment and sustainability-driven strategic-oriented assessments.

SEA for sustainability in energy sector planning

Lisa White, Bram Noble

SEA promotes tiering, communication of sustainability issues and institutional learning, but sustainability objectives aren't being linked to assessment criteria, thus SEA guidance is needed to support sustainability in electricity PPPs.

Integration of SEA in flood management planning

Kiran Hameed, Johann Köppel

The integration of SEA in flood management planning in Pakistan can provide opportunity for planners and decision-makers to establish a long-term and effective flood management infrastructure.

How is biodiversity addressed in SEA?

Margarida Monteiro, Maria Partidário

Analysis on how biodiversity is addressed in SEA practice in a strategic way based on six biodiversity related topics.

Mega-events in Rio de Janeiro: Contributions of SEA

Clara Lemos

This paper looks at the Olympic bid of the city of Rio de Janeiro and the benefits that SEA could have added up to this process.

16.7 Utopian goals or effective tools? Public and stakeholder engagement in SEA

Tuesday 14 May | 11:00-12:30 | Quarter Horse C

Paper session

Chair(s): Giorgio Baldizzone, Ralf Aschemann, Carlo Rega

IAIA Section: Strategic Environmental Assessment

A participative SEA can be extremely effective, if not limited to a simple "presentation" of the plan/program. Case studies show how good participatory strategies are useful in reducing

the time of planning, coping with uncertainties/ conflicts, while increasing ownership and alternative visions, deepening key themes and, ultimately, improving the final plan/program.

Public involvement in spatial planning through SEA

Giorgio Baldizzone, Carlo Rega

Case studies demonstrate that both planning and SEA can greatly benefit from effective public involvement. Overall, participatory processes seems to be conducive to more environmental performing land use policies.

IA: Green wash: Opportunity for meaningful outcomes?

Katharine Gotto Walton, Alison McCallum, Hope Sherwin

Paper looks at the role of impact assessment (IA) in aiding "green wash" alongside the conditions under which the IA process enables socially and ecologically intelligent decision making.

Participatory SEA: What doesn't work and what's needed

Carlo Rega, Giorgio Baldizzone

SEA practitioner were surveyed to identify current strengths and weaknesses of participatory SEA and to put forward feasible innovations to enhance the first and improve the latter.

Papuan Indigenous participation in the Indonesian EIA

Irja Simbiak, Jesmon Sammut

The topic presented is an extensive research conducted based on qualitative methods including case study, direct observation, document analysis, and in-depth interview.

Public perspectives and learning from a SEA case study

Morgan Vespa

This paper is a qualitative assessment of public participation and learning outcomes of the Western Newfoundland Offshore Area Strategic Environmental Assessment.

Public participation and learning in SEA in Kenya

Heidi Walker, John A. Sinclair, Harry Spaling

An examination of public participation processes in Kenyan SEA reveals strengths, weaknesses, opportunities for learning, and subsequent action that facilitates a transition towards sustainability at the community level.

16.8 Applying SEA: Case studies and innovative approaches

Tuesday 14 May | 11:00-12:30 | Arabian C

Paper session

Chair(s): Ralf Aschemann, Giorgio Baldizzone

This session reviews innovative SEA case studies and their contribution to creative and

Concurrent sessions

new approaches within the SEA process in the European Union and beyond. Papers are invited for promising SEA practice regarding various topics, such as baseline data, scoping, elaborating a high quality environmental report, public participation, or monitoring.

SEA Directive implementation: Unfulfilled potential?

Giorgio Baldizzone, Marco Pompilio, Carlo Rega

Ten years of Italian SEA through the first complete experience: the Milan's Plan. But now what is the situation? What right or wrong and what is needed to be changed?

Framework for SEA Alternative generation and evaluation

John Fry, Ainhoa Gonzalez, Riki Therivel, Walter Foley

A Framework for generating and evaluating alternative spatial and non-spatial scenarios for sectoral plans in Ireland.

A question of significance

Felix Sternath, Ernst Mattanovich

SEA directive and habitats directive address "likely significant effects" differently. Perceptions of this ambiguity and a proposal for an unagitated approach to solving the ambiguity in practice are provided.

SEA Review: Ireland's SEA Action Plan 2012-2016

Tadhg O'Mahony, Micheal Lehane

This paper presents key aspects of Ireland's SEA Action Plan formulated by the statutory SEA environmental authorities as a mechanism for implementing the key recommendations of Ireland's SEA Effectiveness Review.

SEA for River Basin Plan and Local Development Plan

Francisco Fabbro Neto, Marcelo Pereira de Souza

The integration between the Water Basin Management Plan and Local Development Plan is improved by SEA. However, differences in objectives and results of each Plan influence the SEA methodology.

IMPACT ASSESSMENT TOOLS

17.1 BREADTH OF IA: COMPREHENSIVE VS. TIGHTER

17.1 It's all in the mix: the lost art of integration

Wednesday 15 May | 16:30-18:00 | Palomino F-H

Paper session

Chair(s): Bryony Walmsley, Peter Tarr

In the same way that lining up the flour, sugar, eggs and butter on the kitchen counter does not make a cake, compiling an appendix of specialist studies does not make an environmental assessment. The session covers tools, methods and approaches for baking the integrated EA cake!

A project management approach to integration in IA

Nigel Fisher

A project management approach to achieving IA integration for the whole project lifecycle. Why current approaches need to change and a review of new applications of tools and initiatives.

Strategic social assessment for catchment planning

Nick Taylor, Mike Mackay

Strategic social assessment supports development of plans that set limits for water takes and water quality in a New Zealand catchment, as part of an integrated process of impact assessment.

What about assessing impact on ecosystem services?

Florence Landsberg, Jo Treweek

This paper presents a method to assess impacts on ecosystem services- or the socio-economic dimensions of environmental impacts. Insights from implementation will also be shared.

Maximizing linkages for sustainable assessment

Dana Feltham

This paper discusses the importance of structuring environmental assessments to maximize linkages between the biophysical and the socio-economic environments as they relate to Aboriginal Communities.

Understanding CBA: Overcoming dilemmas in IA

Emile Dopheide

Understanding specialist studies, like CBA, is crucial in integrated assessment. The paper discusses understanding of CBA among EIA/SEA practitioners and ways to overcome dilemmas in the integration of specialist studies.

17.2 Following up IA Follow-up

Tuesday 14 May | 16:30-18:00 | Mustang

Paper session

Chair(s): Jos Arts, Angus Morrison-Saunders

What is the current state of practice with IA follow-up? How does follow-up occur for the three generations of impact assessment: EIA, SEA and sustainability assessment? If you have theoretical or practical examples of effective IA follow-up we would like to hear from you! The proposed session will feature a series of short presentations followed by facilitated discussion.

Environmental monitoring and compliance methodology

Francois Roger Nguene, Juliet Taza-Azaba, Charlotte Enjoh Fonoch, Suzanne-Aimee Nien Ngapout, Preley Nkerbu

Environmental Monitoring checks impact mitigation/optimization measures. Experience from onshore petroleum projects EIA follow-up has enabled refining of a methodology that could be improved to achieve oil and gas project sustainability.

Beyond assessment: Managing EA commitments

Robert Federico

This presentation focuses on managing long term implementation of commitments arising from the EIA and permitting process to reduce risk of environmental management "falling through the cracks" post EA.

Towards state-of-the-art IA follow-up

Angus Morrison-Saunders, Jos Arts

What constitutes leading best practice, or state-of-the-art IA follow-up? What might be the next generation of IA follow-up? Drawing on international examples this presentation seeks answers to these questions.

17.3 NEW TOOLS AND IA PRACTICES

17.3.1 Incorporating ecosystem services in ESIA: practices, challenges and opportunities

Tuesday 14 May | 14:30-16:00 | Quarter Horse B

Workshop

Chair(s): Ilse Aucamp, Florence Landsberg

IAIA Sections: Biodiversity and Ecology, SIA

The community of practices around ecosystem services in ESIA has grown as a result of, among others, IFC Performance Standards. Social and environmental practitioners will discuss their experience with ecosystem services in ESIA, including costs and benefits, and potential and

17.2 IA FOLLOW-UP: SUCCESS OR BROKEN RECORDS?

limitations of ecosystem services in contributing to a sustainable world.

Reviewing the devastated ecosystem services of Chotiari

Muhammad Husnain

Review of ecosystem services of Chotiari Wetland Complex, ecological and economical destruction of the site after reservoir construction, proposal for ecosystem services restoration, Payments for water services

Revisiting a new EIS mine using ecosystem services

Luis Sánchez, Josianne Rosa

Reviewing the impact assessment of a mining project under an ecosystem approach services provided a more integrated analysis but missed a number of social impacts identified in the traditional EIS.

17.3.2 Territorial impact assessment: Tool for territorial cohesion

Thursday 16 May | 09:00-10:30 | Arabian B

Discussion forum

Chair(s): *Thomas Fischer*

Territorial Impact Assessment (TIA) is a new policy impact assessment instrument which has been brought forward in order helping achieve territorial cohesion within the European Union (EU), by assessing impacts of European policies, including directives. The focus of TIA can be manifold, including, e.g., territorial characteristics as receptors of impacts, the territorial distribution of impacts and territorial evaluation of impacts. This session will consist of a paper explaining the TIA concept and a subsequent discussion on:

- Whether there are any other impact assessment instruments elsewhere in the world that are trying to do the same.
- Whether TIA is a useful addition to the growing IA family, not just within the EU, but elsewhere, too.

The new European concept of Territorial Impact Assessment

Mojca Golobic

17.3.4 Innovative modeling tools for sustainable energy policy assessment

Thursday 09:00-10:30 | Quarter Horse A

Paper session

Chair(s): *Jean-Philippe Waaub*

Energy policy assessment can be achieved through different decision processes and methodological approaches. More integrated analysis is needed. Modelling tools help even to take into account sustainability issues on the long term. Those points can be discussed and analyzed in depth through case studies and presentation of innovative modelling tools.

TIMED approach for energy sustainable development

Maria de Lourdes Vazquez Rascon, Jean-Philippe Waaub, Adrian Ilinca

The new approach Territorial Intelligence Modeling for Energy Development (TIMED) promotes the sustainable wind energy development taking into account socio-cultural and economic-environmental variables that can be identified from citizens' concerns.

Assessing GHG issues in Canadian energy policies

Camille Fertel, Jean-Philippe Waaub

Based on the TIMES-Canada model for long term energy and environmental policy analysis, we discuss the implementation of different Canadian GHG emission reduction targets, focusing on oil, electricity, energy trade.

Bayesian networks to support SEA

Miguel Equihua, Francisco Javier Díaz, Guadalupe Méndez, José Luis Alvarez, Christian A. Delfin Alfonso, María del Carmen Alvarez, Arturo Hernández, Octavio Perez-Maqueo, Arturo Bermudez

We present a spatially explicit support system for decision making, which was based on the use of Bayesian networks. The system was developed in the context of an SEA.

DRAFT

17.4 TOOLS FOR IA PRACTITIONERS

17.4.1 How am I supposed to do this? Methods to address ecosystem services in ESIA

Thursday 16 May | 09:00-10:30 | Arabian A

Pecha Kucha/ Open Space Technology Session

Chair(s): *Florence Landsberg, Ana Gabriela Factor, Jo Trewick*

IAIA Sections: Biodiversity and Ecology, SIA

While new impact assessment standards require ESIA to address ecosystem services, guidance on how to do it is sparse. Practitioners with experiences in incorporating ecosystem services in ESIA will present their methods. Then all participants will lead structured groups sessions around selected topics, guided by an experienced Open Space facilitator.

Many tools make light work

Mervyn Mason, Robin Mitchell, Brendan Hart, Myles Mander

Our paper discusses some of the many pitfalls we have encountered in ecosystem services assessment, and how to navigate around them, using real projects as examples.

The Ecosystem Services Review for Impact Assessment

Florence Landsberg, Jo Trewick

This presentation gives an overview of the Ecosystem Services Review for Impact Assessment, a structured method to incorporate ecosystem services into ESIA, including overall conceptual framework, implementation steps

and tools.

Natural non-point source management using LID

Jae Woon Lee, Jae Woon Lee, Heon Gak Kwon, Se Uk Cheon, Byung Seok, Du Kee Kang

LID (Low Impact Development) is Technology-based urban watershed environment, you want to restore the system to its natural state as possible to the most progressive land planning and engineering design.

17.4.2 Environmental baseline data in the IA process: What is appropriate?

Wednesday 15 May | 14:30-16:00 | Mustang

Paper session

Chair(s): *Paul Krause*

This session is designed to bring IA professionals from industry, consulting, academia, and agencies together to present case studies and lessons learned on how high quality and robust environmental baseline data have benefited projects. Additionally, it will generate discussion topics and help focus future projects to develop the appropriate level of baseline rigor.

Baseline studies in the IA: Form and function

Paul Krause, Jennifer Holder, Edward Buchak

The use of a long-term regional approach to determining environmental baseline conditions will provide regulatory agencies, project proponents, and stakeholders a higher level of confidence in the IA outcome.

Empirical EIA with long-term wildlife monitoring.

John Kansas, Amit Saxena, Michael Charlebois

Long-term monitoring as part of EIA at the project-level is an often ignored yet useful empirical basis for understanding cumulative impacts, and can help to bridge EIA and regional planning.

Potential Benefits and Challenges of Incorporating ES

Ross Mitchell, Andrea Daezli, Emily Cooper, Kristina Mitchell, Dirk Nuyens, Robert Mugo

This paper discusses potential risks and opportunities associated with ecosystem services in the Alberta oil sands. Potential implications for EIA proponents, regulators, and stakeholders are discussed and a conceptual methodology/framework.

Ecosystem and Nature Map and Public Appeal

Myungjin Kim, Jiyeon Kim, Youngkyu Shin, Kyunghwan Ahn

The Ecosystem and Nature Map has done an important role to preserve ecosystem in pressure of development. It will contribute both to ecosystem quality and to increasing impact assessment reliability.

Conservation Class of Vegetation in Impact Assessment

Kyunghwan Ahn, Jiyeon Kim, Jeahwa Suh, Hangsoo Cho,

Concurrent sessions

Myungjin Kim

Conservation Class of Vegetation is very important for preparing Ecosystem and Nature Map. The multicriterion matrix technique can contribute to natural resources management of nation and EIA.

IA LAW, POLICIES, AND PRACTICE

18.1 Governing geoengineering through environmental assessment

Monday 13 May | 14:30-16:00 | Palomino D

Paper session

Chair(s): Jason Blackstock

This session will consider the implementation of EA to emerging geoengineering technologies. The panel will explore the governance role that EA processes play in generating decision-making conditions that respond to the emergent nature of geoengineering technologies, the global nature of the potential impacts from geoengineering, and the complex ethical issues that surround these proposals.

Social, political, and ethical issues related to geoengineering

Andy Parker

This presentation will consider recent political and scientific developments in the field of geoengineering in order to elucidate the possible role of assessment processes in addressing the concerns of stakeholders.

Applying traditional IA to geoengineering research

David Keith

This presentation will discuss the relevance of traditional assessment processes for geoengineering and the possible roles of the impact assessment community as part of a successful regime for future assessment.

EA and Geoengineering: The international legal framework

Neil Craik

This paper will examine the application of international obligations to conduct environmental assessments to geoengineering proposals.

The international regulation of Ocean Fertilization Act

Anna-Maria Hubert

This presentation will draw on experience in early attempts to regulate marine geoengineering experiments in order to draw implications for the role of assessment.

18.2 South Asia IA systems and trends (I)

Wednesday 15 May | 11:00-12:30 | Quarter Horse A

Paper session

Chair(s): Yinghua (Cherry) Hu

This session introduces South Asian IA systems and trends like planning EIA, retrospective EIA and environmental risk assessment developed in recent years. Beyond the new form of EIA, new sectors such as shale gas and new concern such as air emission for those traditional major ecological impact projects are discussed.

Necessity of concise IA for sustainable Japan

Sachihiko Harashina

Why concise IA is necessary in Japanese EIA system is discussed.

Environmental impacts of shale gas development in China

Li Tong, Haisheng Li, Xueshuang Zhou

Environmental Impacts of shale gas development in China and recommendations on management of their environmental impact assessment.

The survey of EIA effectiveness

Bai Yan Bin, Li Xin Hua

The results and discussion have highlighted current opinion about the effectiveness of EIA in the Xinjiang region of China. Some ways, especially follow-up, must be carried out.

Reduced EIA procedure after great East Japan earthquake

Daisuke Uesako, Tetsuro Uesugi, Kenji Kamita

The exemption of EIA procedure and the application of a drastically-simplified procedure for restoration or reconstruction projects after the Great East Japan Earthquake will be introduced.

Actual conditions of EIA Review Committees in Japan

Yuki Shibata, Soichiro Ilie

We conducted a questionnaire survey to find out the actual conditions of EIA review committees in Japan. Our conclusion suggests some important improvements on the review committees are needed.

Development in Coastal Areas: The Beibu Gulf

Yinbo Zhang, Baoyuan Huang, Xiaowen Liu, Yuhuan Zhang, Yingxian Long, Jing Yang

The paper is to discuss how the strategic marine assessment is conducted in China, taking the Beibu Gulf Economic Rim as a case.

18.3 South Asia IA systems and trends (II)

Wednesday 15 May | 16:30-18:00 | 100B

Paper session

Chair(s): Yinghua (Cherry) Hu (tentative)

This session introduces South Asian IA systems and trends like planning EIA, retrospective EIA and environmental risk assessment developed in recent years. Beyond the new form of EIA, new sectors such as shale gas and new concern such as air emission for those traditional major ecological impact projects are discussed.

Study on pollutants' reduction methods on dam road

Jun-Yeon Hwang, Sung-Oh Sa, Sang-Jin Song, Se-Won Kim

Cleaning road being proposed reduction measures for road pollutants was very efficient and stable, this measures could reduce pollutants that occur at road around Dam area through the field investigation.

Estimation on electric savings after nuclear disaster

Masaru Ito

We make up the method of calculating "the real and nominal savings" of household's energy consumption. Main factor is a temperature which is out of control.

Factors affecting ecological environment in Xinjiang

Li Xinhua, Wang Lin, Bai Yanbin

Therefore, the change of natural factors and the disturbance of human factors can bring about positive and negative effects to the development of ecosystems in south Xinjiang.

Reducing environmental conflict with suit case analysis

Young Soo Lee, Jun Kyu Choi, Sang Un Han, Kong Jang Cho, Young Sook Lee

Main issues of Korean suit cases are obedience of EIA negotiation procedures, properness of plaintiff, inappropriate environmental impact assessment report, and discretion violation and overuse. We suggest several measures.

Developing an EIA Curriculum for Pakistani Universities

Thomas Fischer, Ahmad Saeed, Bobbi Schijf

This paper presents results of a project conducted within IUCN Pakistan's NIAP (National Impact Assessment Programme) initiative in which a standardised EIA curriculum outline has been developed for Pakistan.

Traffic Noise Modeling in China's Noisely Impact Assessment

Yinbo Zhang, Yuhuan Yuhuan, Baoyuan Huang, Huang Long, Jing Yang

This article is to introduce the practices of traffic noise impact assessment in China.

CULTURAL HERITAGE

19.1 Who has the right to define cultural heritage values in impact assessments? (I)

Tuesday 14 May | 14:30-16:00 | Quarter Horse C

Paper session

Chair(s): Arne Tesli

The practice of defining cultural heritage values varies between different situations and countries. It is not always clear who can decide cultural heritage values in impact assessments. Should it be locally defined, nationally defined or internationally defined? Who has the right to define the scope and value of cultural heritage?

Heritage value and CHIA: The Hong Kong experience

Ellen Cameron, Julie Van Den Bergh

A discussion of the co-development of cultural heritage impact assessment and evaluation of heritage significance in Hong Kong over the past 15 years and the way forward.

Cultural heritage and the local museums: Two examples

Anne Eiby

The local Danish museums has pointed out the cultural heritage values in the landscape and cities. During the EIA, they are also the authority. How does that work?

The right to an indigenous past

Marit Myrvoll

The paper will discuss how cultural heritage values and rights are closely connected to 1) the self-identification of an indigenous people and 2) the identification and legislation from state authorities.

Construction pipeline challenges in the Incas' earth

Lucia Balbuena, Jose Carlos Hernani, Alan Marlon Garcia, Gisella Vilca, Enrique Tovar, Germán Sulca

TgP's archaeological protection project, during the Pipeline construction, allowed identifying, delimiting, and rescuing archeological sites, to preserve the cultural heritage and preserve the knowledge.

19.2 Who has the right to define cultural heritage values in impact assessments? (II)

Tuesday 14 May | 16:30-18:00 | Quarter Horse C

Paper session

Chair(s): Inge Lindblom

The practice of defining cultural heritage values varies between different situations and countries. It is not always clear who can decide cultural heritage values in impact assessments. Should it be locally defined, nationally defined or internationally defined? Who has the right to define the scope and value of cultural heritage?

Monitoring cultural significance and impact assessments

Ana Pereira Roders

A paper discussing the application of a framework to monitor cultural significance in historic urban landscapes, including the attributes and values defining cultural significance, and their relation in time.

Assessing Amsterdam's heritage management framework

Loes Veldpaus, Johan Swart, Ana Rita Pereira Roders, Karel Bakker

This paper reveals how Amsterdam assesses and controls the impact of development on attributes of outstanding universal value through their local policies and management procedures.

Doing credible cultural assessment

Patricia McCormack

This paper proposes that consultants doing cultural assessments should have qualifications equivalent to those of expert witnesses for the courts.

Definition of cultural heritage values in IAs

Arne Tesli, Inge Lindblom

The paper discusses to what extent conventional criteria for defining cultural heritage values are well suited for application in modern impact assessments.

19.3 The Contribution of New Approaches in Cultural Heritage Studies for IA

Monday 13 May | 16:30-18:00 | Arabian A

Paper session

Chair(s): Christopher Polglase

IAIA Section: Cultural Heritage

This session will explore a number of new approaches and how they contribute to cultural heritage studies in support of impact assessment. The session participants will provide examples of the application of such technologies and as GIS, remote sensing, and data organization to enhance protection of cultural heritage.

LiDAR at Caracol, Belize and Heritage Management

Arlen Chase, Diane Chase, John Weishampel

Airborne LiDAR is revolutionizing landscape archaeology in tropical areas and also has the potential to greatly enhance the cultural heritage management of both modern and ancient resources.

Historic urban landscapes: An assessment framework

Loes Veldpaus, Ana Rita Pereira Roders, Bernard

Colenbrander

This paper introduces an assessment framework that allows comparison between the current policies—planning and heritage protection and the critical steps recommended by the UNESCO Historic Urban Landscape.

New technologies and cultural heritage

Christopher Polglase

This session organizer will discuss the contribution of new technologies to cultural heritage studies for impact assessment, with a focus on the papers presented during this session.

Determining effectiveness in heritage impact assessment

Ana Pereira Roders, Jacques Teller, Alan Bond

A paper discussing the application of a framework to determine the effectiveness of (cultural) heritage impact assessments, distinguishing significance, change agents, management, impact and effectiveness assessments.

RESEARCH AND EA

20.1 Research and impact assessment (I)

Monday 13 May | 14:30-16:00 | Arabian A

Roundtable

Chair(s): Richard Morgan

The first of two sessions, this will be an opportunity for IA researchers to meet other researchers and to discuss practical issues of doing research in this field, and the role of IAIA in supporting research. Themes for discussion might include: How can IAIA better support researchers, including research students? Do we need mechanisms within IAIA to facilitate researcher interaction, especially between conferences? Are there ways to use IAIA to access research funds?

20.2 Research and impact assessment. II

Thursday 16 May | 09:00-10:30 | Palomino E

World café

Chair(s): Richard Morgan

This will be a dynamic “research brokerage” session! Come with a research idea, including topics inspired by the conference itself, for which you are seeking collaborative partners (e.g., research project, edited book, etc.). Present an outline of your idea in no more than three minutes; then we will use breakout groups to discuss individual ideas and explore ways forward. Groups will make brief reports back to the whole session.

DISASTERS & CONFLICTS

21.1 Impact assessment and disaster management: Lessons from recent disasters

Monday 13 May | 14:30-16:00 | Quarter Horse A

Paper session

Chair(s): Charles Kelly

Disasters result in significant negative impacts on lives and society. Assessing the impacts of disasters and defining the practical and policy lessons identified through these assessments is critical to improving disaster management. The session will review the results of impact assessments for recent disasters.

Environmental Health Management in Evacuated Shelter

Siriwan Chandanachulaka, Amporn Bussarangsi

Experiences from Thailand in environmental health disaster management can be shared among Impact Assessment practitioners. Disaster preparedness is an important issue for the next generation.

Policy Integration between EA and Disaster Management

Thomas Fischer, Sachihiko Harashina, Tom Gore

This paper reports on the results of a Japan - UK workshop on policy Integration between EA and Disaster Management, held in Tokyo and Miyaga Prefecture in 2012.

Impact assessment and mass casualty events: Considering the Boston Marathon bombing and similar events

Charles Kelly

The process of assessing impacts has rarely been formally applied to potential mass casualty events, or as part of the management of these events once they occur. The paper considers how the process of impact assessment, including assessing the social, economic, health, environmental and other impacts, can be applied before and after mass casualty events. Recommendations on further research and practical actions are provided.

DRAFT

SPECIAL TO IAIA

22.1 Writing and submitting papers to IAPA journal: An interactive workshop

Wednesday 15 May | 14:30-16:00 | 100B

Panel/Workshop

Chair(s): William Ross

Come and meet Angus Morrison-Saunders and Francois Retief, the editors of IAIA's journal, *Impact Assessment and Project Appraisal*. Angus and Francois will give advice to IAIA members and potential contributors of papers about the process of writing and submitting articles, including the process of dealing with reviewer comments, and even being a reviewer. It is all about what IAIA members need to know and provides the opportunity to meet the editors and ask questions about the mysteries of the publication process.

22.2 IAIA Affiliates forum

Tuesday 14 May | 18:10-19:10 | Quarter Horse A

text to be added

DRAFT