

出國報告（出國類別：國際會議）

**國際影響評估協會(International
Association for Impact Assessment,
IAIA)西元 2018 年研討會出國報告**

服務機關：行政院環境保護署

姓名職稱：劉技正彥均

派赴國家：南非

出國期間：107 年 5 月 13 日至 107 年 5 月 24 日

報告日期：107 年 8 月 24 日

國際影響評估協會(International Association for Impact Assessment, IAIA)西元 2018 年研討會出國報告

摘要

國際影響評估協會(International Association for Impact Assessment, IAIA)為一深受各國重視之國際性民間組織，致力於倡導影響評估觀念，透過國際間各類影響評估方法、制度之研析探討及經驗交流，發展影響評估技術，領導全球於制定政策、計畫或相關決策過程，必須充分利用、納入影響評估思維。本（第 38）屆研討會主題定為「轉型社會之環境正義(Environmental Justice in Societies in Transition)」，主要探討全球社會面臨新環境挑戰而不斷在轉型中所遭遇之環境正義問題與因應等議題，這些挑戰及改變不僅潛在地對人類環境、物質永續帶來威脅，也造成社會與自然環境間各種不平等。

行政院環境保護署（下簡稱環保署）2016 年開始研擬「社會影響評估技術規範」，除彙整國際間社會影響評估相關法規與研究文獻，並分析我國發展情境與相關法規現況，同時參酌 2009 年《公民與政治權利國際公約及經濟社會文化權利國際公約施行法》對人權主張之肯定，納入原住民族權益、土地徵收及非自願迫遷等重要議題，鑑於技術規範已有初步草案成果，且與本屆研討會主題相符，故以「Environmental impact assessment in Taiwan drives the inclusion of social impact assessment guidelines（臺灣環境影響評估納入社會影響評估技術規範）」為題投稿發表文章，並於會中簡報與國際交流汲取經驗，作為環保署後續制度推動之參考，同時提升我國國際間能見度。

目 次

摘要	I
壹、前言及目的.....	3
貳、行程規劃及參與人員	4
參、南非德班市(Durban)簡介	6
肆、第 38 屆國際影響評估協會研討會概要	7
伍、環保署參與人員發表文章及簡報.....	11
陸、技術參訪概要.....	12
柒、心得與建議.....	15
附錄一 第 38 屆國際影響評估協會(IAIA)研討會議資料	
附錄二 行政院環境保護署參與人員投稿文章	
附錄三 行政院環境保護署參與人員現場簡報資料	

國際影響評估協會(International Association for Impact Assessment, IAIA)西元 2018 年研討會出國報告

壹、前言及目的

一、前言

國際影響評估協會(International Association for Impact Assessment, IAIA)於西元(下同)1980年在美国成立,為一深受各國重視之國際性民間組織,聚集了來自世界各地影響評估領域之研究學者、專家、業界人士、非政府組織(NGO)、政府決策者、技術顧問機構、在校教師、學生及各類影響評估工具之使用者等,致力於倡導影響評估觀念,透過國際間各類影響評估方法、制度之研析探討及經驗交流,發展影響評估技術,領導全球於制定政策、計畫或相關決策過程,必須充分利用、納入影響評估思維。國際影響評估協會(包含其17個分會)迄今總會員人數超過5,000人,來自世界125國家,每年均會設定一特定環境主題,於當地或擇定一國家城市規劃相關訓練課程,並舉辦研討會進行深入探討。

本(第38)屆研討會主題定為「轉型社會之環境正義(Environmental Justice in Societies in Transition)」,主要探討全球社會面臨新環境挑戰而不斷在轉型中所遭遇之環境正義問題與因應等議題,諸如全球氣候變遷、歐美政權轉移、大規模移民之社會結構改變等,這些挑戰及改變不僅潛在地對人類環境、物質永續帶來威脅,也造成社會與自然環境間各種不平等增加。雖然各種開發(或發展)之目標是為了創造永續之環境,然而,實際上得利者只是少數人,多數人仍遭受開發衝擊下帶來之不平等,遂提出環境管理必須將環境成本轉化為所有人之民生福利,而非只是權力少數之概念,故此,本屆研討會特選定於南非德班市(Durban)舉行,南非正處於社會轉型之過渡期,尤其德班市歷經許多挑戰,諸如貧富不均、種族隔離、各種自然環境資源(海洋、海灣河口、河流、濕地、森林等)之保護、保育限制等,全國正努力於消彌社會上各種不平等。

二、目的

我國《環境影響評估法》於1994年制定並公布施行,行政院環境保護署(下簡稱環保署)為該法之中央主管機關,負責國內權管各類型開發行為之環境影響評估(下簡稱環評)審查、政府政策環評徵詢作業、環評相關法規與制度之推動、檢討等工作,惟環評法施行迄今20餘年,環保署省思現行國內諸多開發與經濟衝突事件中,除傳統環境項目(如空氣、廢水、廢棄物、健康風

險、生態等) 相關評估審核機制已漸趨成熟完整外，就開發行為權益相關民眾團體重視之社會影響層面，在環評法外其他主管法規雖已有相關規範下，環評程序當如何看待且執行，以落實環評過程中權益相關民眾團體之知情、溝程序，為環保署目前致力推動之目標。

環保署於 2016 年 9 月至 2017 年間委託國立臺灣大學社會科學院風險社會與政策研究中心著手研擬「社會影響評估技術規範」，除彙整國際間社會影響評估相關法規與研究文獻，並分析我國發展情境與相關法規現況，同時參酌 2009 年《公民與政治權利國際公約及經濟社會文化權利國際公約施行法》對人權主張之肯定，納入原住民族權益、土地徵收及非自願迫遷等議題，期間舉辦多場專家諮詢會、機關研商會及公聽會，與各界專家學者、實務工作者及民間團體等進行意見交流及溝通。鑑於環保署研擬「社會影響技術規範」已有初步草案成果，且與本屆研討會主題「轉型社會之環境正義」密切相關，故以「Environmental impact assessment in Taiwan drives the inclusion of social impact assessment guidelines (臺灣環境影響評估納入社會影響評估技術規範)」為題投稿文章，希冀藉由國際交流汲取經驗，作為環保署後續制度推動之參考，同時提升我國國際間能見度。

貳、行程規劃及參與人員

一、行程規劃

第 38 屆國際影響評估協會訂於 107 年 5 月 16 日至 5 月 19 日假南非德班市國際會議中心(Durban International convention center, ICC)舉辦為期 4 日之研討會，並於會後 5 月 20 日至 5 月 21 日規劃為期 2 日之技術參訪行程。

囿於臺灣目前尚無直飛南非德班之班機，必須由第三機場轉機前赴會議地點，爰本次環保署參與人員規劃行程表及摘要如表 1。

表 1 環保署參與第 38 屆國際影響評估協會(IAIA)研討會行程表

日期	地點	行程摘要
107 年 5 月 13 日至 5 月 14 日	臺灣臺北至阿拉伯聯合大公國杜拜	啟程，由臺灣桃園國際機場(Taiwan Taoyuan International Airport)搭乘阿聯酋航空 EK0367 班機飛往阿拉伯聯合大公國杜拜機場(Dubai International Airport)轉機。
107 年 5 月 14 日至 5 月 15 日	阿拉伯聯合大公國杜拜至南非德班	於阿拉伯聯合大公國杜拜機場轉乘阿聯酋航空 EK0775 班機飛往南非德班沙卡國王機場(King Shaka International Airport)。
107 年 5 月 16 日	南非德班	1. 開幕全體會議：開幕式表演、貴賓致詞及

日期	地點	行程摘要
		主題演講「Do you have to be white to be green?」 2. 專題會議：選擇「公共建設融資及環境影響評估：管理風險及公眾利益」。
107年5月17日	南非德班	1. 主題論壇：擇選主題「生物多樣性補償措施之改進」。 2. 專題會議：擇選主題「透過公眾參與促進影響評估之環境正義(I)」。 3. 專題會議：擇選主題「透過公眾參與促進影響評估之環境正義(II)」。 4. 專題會議：發表「臺灣環境影響評估納入社會影響評估」文章。
107年5月18日	南非德班	1. 主題論壇：擇選主題「不確定世界下做決定：歡迎來到人類世」。 2. 專題會議，擇選主題「生物多樣性保育(I)」。 3. 專題會議，擇選主題「生物多樣性保育(II)」。 4. 閉幕式：閉幕表演及致詞。
107年5月19日	南非德班	1. 主題論壇，擇選主題「水力發電：迎接永續性挑戰」。 2. 專題會議，擇選主題「影響評估之社會正義及社區參與」。 3. 專題會議，擇選主題「都市及鄉村景觀文化遺產管理」。 4. 閉幕式：閉幕表演及致詞。
107年5月20日	南非德班	Hluluwe-iMfolozi Park (赫盧赫盧韋—印姆弗魯茲公園) 參訪及專題簡報：南非自然保護區管理政策。
107年5月21日	南非德班	Thula Thula Game Reserve (圖拉圖拉野生動物保護區) 參訪及專題簡報：礦場開發對野生動物保護區之衝擊。
107年5月22日至5月23日	南非德班	返程，南非德班沙卡國王機場飛往阿拉伯聯合大公國杜拜機場轉機。
107年5月23日至5月24日	南非德班	南非德班沙卡國王機場前往阿拉伯聯合大公國杜拜機場轉機返回桃園國際機場。

二、參與人員

本案係依「行政院環境保護署因公出國人員選派作業要點」規定，指派與本屆研討會主題相關，且負責辦理環境影響評估審查業務之劉技正彥均參加，並於研討會投稿發表文章，該員相關業務經驗及近2年績效如表2。

表 2 第 38 屆國際影響評估協會(IAIA)研討會環保署參與人員業務經歷績效簡介

環保署與會同仁	執行相關業務績效
劉技正彥均	<ol style="list-style-type: none"> 1. 辦理近 3 年開發行為個案環境影響評估審查業務，包括：離岸風力發電計畫、國道 3 號龍潭交流道工程、金門料羅港圍堤造地工程等環境影響說明書；宜蘭大溪蜜月灣、利英工礦、大林電廠擴建、深澳發電廠擴建、宜蘭科學園區、臺北港開發計畫等環境影響差異分析報告；澎湖新訂望安花宅聚落政策環評審查。 2. 主辦深澳發電廠擴建、安坑線輕軌運輸系統、國道 4 號臺中環線豐原潭子段工程、利英工礦申請核定及註銷礦業用地等案行政訴願、訴訟委任答辯相關業務。 3. 主辦第 12 屆環評委員遴選作業、近 3 年年環評技術顧問機構評鑑計畫、協助研擬社會影響評估規範草案。

參、南非德班市(Durban)簡介

德班市(Durban)為南非共和國夸祖魯—納塔爾省(KwaZulu-Natal)之第一大城市，祖魯語稱之為「eThekweni」，祖魯語「itheku」意思為「海港或瀉湖」，而「eThekweni」即由此語而來。德班市面積約 2,300 平方公里，連同其周圍諸多小鎮有將近 370 萬之人口，其位於南非東岸，濱臨印度洋之西南側，為南非第 3 大城市，僅次於約翰尼斯堡(Johannesburg)以及開普敦(Cape Town)，是印度洋海岸線非洲部分最大之城市，使用語言包括英語、南非荷蘭語、祖魯語等。

德班港列為非洲第 2 大港口（全球第 9 大港口），是非洲最繁忙的港口，也是通往非洲大陸與其他印度洋沿岸國家的門戶，港口岸長 21 公里，約有 60 個泊位，由 20 多個碼頭運營商運營，每年約有 4,500 多艘商船停靠該港口。德班主要產業包括紡織、化學、煉油、船舶修造、汽車裝修、橡膠及糖類食品等，並擁有大型煉油廠、製糖廠及汽車裝修廠等。進口產品主要有機械、原油、交通設備、紡織品及化工產品等；主要出口產品為錳礦、鋼材、黃金、煤炭、鐵礦及糖等。

德班氣候宜人，四季如春，全年平均溫度介於 17°C 至 28°C，旅遊業發達，城市之景點與美麗海灘（圖 1）吸引眾多國際觀光客，城市的旅遊業對國家經濟產生重大貢獻。德班也是南非政府自 2014 年以來所推動之 Operation Phakisa 計畫下之海洋經濟產業主要發展區域之一。此外，德班亦是南非國際會議之都，許多重要之國際會議都在德班國際會議中心(圖 2)舉行，包括：南非經濟首腦會議、2000 年第 13 屆國際愛滋病會議(International AIDS Conference)、2002 年非洲聯盟

首腦會議上成立了非洲聯盟、2009 年反對種族歧視國際會議、2011 年聯合國氣候大會、2013 年第 5 屆金磚國家峰會(BRICS Summit)、2016 年第 21 屆國際愛滋病會議等。

德班是一個多元文化之城市，其三個主要社會群體有著各自獨特之背景，融非洲、印地安及英國傳統為一體，其中還有源於荷蘭、葡萄牙及中國傳統。第二、三代德班發展了各式各样的食品、餐館、藝術、手工藝及民族特色舞蹈。



圖 1 德班市景與海灘



圖 2 德班國際會議中心(Durban ICC)

肆、第 38 屆國際影響評估協會研討會概要

一、會議主題

會議主題定為「轉型社會之環境正義(Environmental Justice in Societies in Transition)」，主要探討全球社會面臨新環境挑戰而不斷在轉型中所遭遇之環境正義問題與因應等議題，諸如全球氣候變遷、歐美政權轉移、大規模移民之社會結構改變等，這些挑戰及改變不僅潛在地對人類環境、物質永續帶來威脅，也造成社會與自然環境間各種不平等增加。雖然各種開發（或發展）之目標是為了創造永續之環境，然而，實際上得利者只是少數人，多數人仍遭受開發衝擊下帶來之不平等，遂提出環境管理必須將環境成本轉化為所有人之民生福利，而非只是權力少數之概念，故此，本屆研討會特選定於南非德班市(Durban)舉行，南非正處於社會轉型之過渡期，尤其德班市歷經許多挑戰，諸如貧富不均、

種族隔離、各種自然環境資源（海洋、海灣河口、河流、濕地、森林等）之保護、保育限制等，全國正努力於消弭社會上各種不平等。

第 38 屆國際影響評估協會研討會 Logo 即配合本次會議主題及舉辦地點，設計宣傳 Logo 如圖 3，「橢圓形盾牌」及「戰矛」為南非祖魯戰士之傳統武具，象徵南非正努力於消弭社會轉型下之各種不平等與對立。



圖 3 第 38 屆國際影響評估協會研討會 Logo

二、會議進行方式

第 38 屆國際影響評估協會研討會訂於 107 年 5 月 16 日至 5 月 19 日舉辦，因討論議題眾多，分為「開幕式」「主題論壇」「分組主題報告」及「閉幕式」等方式進行，合計共進行 9 項主題論壇、104 場次分組主題報告，400 篇以上文章發表，43 篇海報展示（詳附錄 1 大會手冊資料），總計參加人數達 980 人以上，第 38 屆國際影響評估協會研討會議程如圖 4。

會議 Conferences				技術參訪 Technical Visits	
16 May	17 May	18 May	19 May	20 May	21 May
報到 Registration	主題論壇 Theme Forum	主題論壇 Theme Forum	主題論壇 Theme Forum	參訪第1天 Technical Visit (Day 1)	參訪第2天 Technical Visit (Day 2)
	分組主題報告 Concurrent Sessions	分組主題報告 Concurrent Sessions	分組主題報告 Concurrent Sessions		
開幕式 Opening plenary	海報發表 Poster Sessions	分組主題報告 Concurrent Sessions	分組主題報告 Concurrent Sessions		
	分組主題報告 Concurrent Sessions	分組主題報告 Concurrent Sessions	分組主題報告 Concurrent Sessions		
分組主題報告 Concurrent Sessions	分組主題報告 Concurrent Sessions	分組主題報告 Concurrent Sessions	閉幕式 Closing plenary		

圖 4 第 38 屆國際影響評估協會研討會議程

三、開幕式(Opening plenary)

在 107 年 5 月 16 日開幕式全體會議進行，陸續進行開幕表演、貴賓致詞及主題演講，現場照片如表 3。

- (一) 共同主持人 Mtsako Baloyi 與 Sean O'Beirne 開幕致詞。
- (二) 國際影響評估協會主席 Maria Orenstein 致詞。

- (三) 南非德班市長 Cllr Zandile Gumede 致詞。
- (四) 南非環境事務部部長 Dr. Bomo Edith Edna Molewa 致詞
- (五) 介紹 IAIA 全球榮耀獎。
- (六) 世界銀行集團顧問 Charlotte McClain-Nhlapo 紀念 Charlie Wolf 演講。
- (七) Albie Sach 壓軸演講，主題為「Do you have to be white to be green?」

表 3 開幕式表演及貴賓致詞情形



四、主題論壇 (Theme Forums) 及分組主題報告 (Concurrent Sessions)

本屆研討會以主題「轉型社會之環境正義」，訂定 9 項關鍵議題，包括：「瞭解利害關係人對影響評估之期待 (Understanding stakeholder expectations in impact assessment)」、「改進實施生物多樣性補償 (Toward improved implementation of biodiversity offsets)」、「公共建設規劃與評估之彈性 (Resilience in infrastructure planning and assessment)」、「在一個不確定之世界做

決定：歡迎來到人類世(Decision-making in an uncertain world: Welcome to the Anthropocene)」、「以法律觀點探視環境正義(Legal perspectives on environmental justice)」、「國際金融：獨立問責機制之角色(International Finance: The role of independent accountability mechanisms)」、「非自願移居：社會經營許可(involuntary resettlement: Social license to operate)」、「探討品質與正義之關係(Exploring the relationship between quality and justice)」、「水利發電：迎接永續性挑戰(Hydropower: Meeting the sustainability challenges)」等，並分不同會場邀集各方以論壇方式進行交流、探討，據以分享不同國家之意見及經驗。

本屆研討會共計投稿文章達 400 篇以上，依文章題目分類為「轉型社會之環境風險評估及管理(Assessing and managing environmental risks in societies in transition)」、「衝擊評估對人類福祉之貢獻(Contribution of IA to human wellbeing)」、「生態系統服務、健康生活及環境正義(Ecosystem services, healthy livelihood, and environmental justice)」、「能源與轉型社會(Energy and societies in transition)」、「氣候變遷之環境正義挑戰(Environmental justice challenges of climate changes)」、「人權、平等及環境正義(Human rights, equality, and environmental justice)」、「Indigenous peoples and environmental justice(原住居民與環境正義)」、「公眾參與及環境正義(Public participation and environmental justice)」、「農業、林業及漁業(Agriculture, Forestry, and fishery)」、「生物多樣性及生態(Biodiversity and ecology)」、「氣候變遷(Climate changes)」、「文化遺產(Culture heritage)」、「數位影響評估(Digital IA)」、「災害與衝突(Disasters and conflicts)」、「採掘資源(Extractive resources)」、「治理與執行(Governance and implementation)」、「健康影響評估(Health impact assessment)」、「原住居民(Indigenous peoples)」、「發電與運輸(Power generation and transmission)」、「影響評估之專業發展及能力建構(Professional development and capacity building in IA)」、「公眾參與(Public participation)」、「再生能源(Renewable energy)」、「社會影響評估(Social impact assessment)」、「技術與方法(Tools and methods)」等 24 項，並分成 104 場次以上進行分組主題報告。

五、海報展示(Posters Sessions)

本屆研討會共計投稿海報展示達 43 篇，依展示題目分類為「農業、林業及漁業(Agriculture, Forestry, and fishery)」、「生物多樣性、生態及生態系統服務(Biodiversity and ecology and ecosystem services)」、「氣候變遷(Climate changes)」、「災害與衝突(Disasters and conflicts)」、「教育與影響評估專業(Education and IA profession)」、「環境影響評估(EIA)」、「能源(Energy)」、「環境

正義(Environmental Justice)」、「治理(Governance)」、「健康(Health)」、「公眾參與 (Public participation)」、「系統工程與評估 (Systems Engineering and assessment)」、「技術與方法(Tools and methods)」等 13 類別。海報展示現場如圖 5。

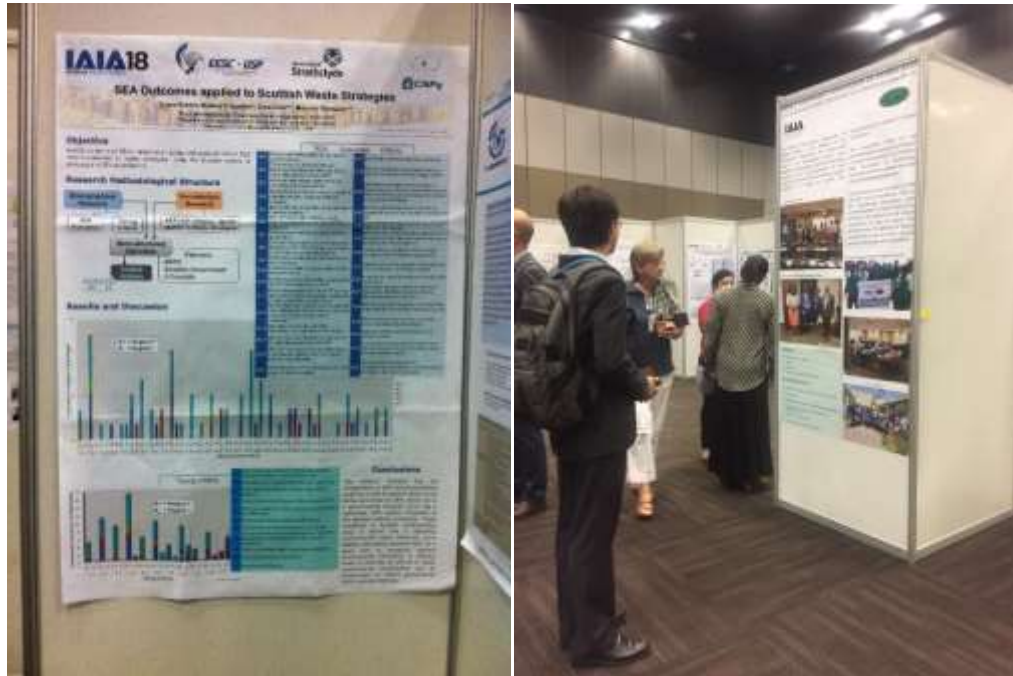


圖 5 海報展示會場

伍、環保署參與人員發表文章及簡報

環保署於 2016 年起依據「環評法施行細則」第 19 條第 1 項第 5 款及「開發行為環評作業準則」第 36 條，著手研擬「社會影響評估技術規範」，以落實環評法第 4 條定義之「社會環境」影響評估，期望邁向轉型正義之第一小步，遂於本屆國際影響評估協會研討會投稿發表文章，文章內容闡述我國現行環評法制度下之環境影響評估推動背景、法規現況、可能遭遇問題、技術規範草案條文及未來變革想法，文中並以「日月潭向山觀光旅館 BOT 案」為例，就公民團體質疑重點，檢討國內現行環評制度下社會影響評估之不足。文章全文詳附錄 2，已刊登於本屆國際影響評估協會網站(<http://conferences.iaia.org/2018/abstracts.php>)，環保署派赴人員 107 年 5 月 17 日分組主題報告情形如表 4，簡報資料詳附錄 3。

表 4 環保署派赴人員現場簡報情形



陸、技術參訪概要

本屆研討會規劃技術參訪有 2 項行程，分別為「赫盧赫盧韋—印姆弗魯茲公園(Hluhluwe-iMfolozi park)」及「自然海岸與社區走訪(Wild coast and community walking tour)」，與會人員得自行選擇其中之一參加。環保署派赴人員選擇「赫盧赫盧韋—印姆弗魯茲公園(Hluhluwe-iMfolozi park)」行程，該行程參訪地點又包含「赫盧赫盧韋—印姆弗魯茲公園(Hluhluwe-iMfolozi park)」及「圖拉圖拉野生動物保護區(Thula Thula Game reserve)」，本行程參訪成員共計 41 人（如圖 6）。參訪情形摘述如下：



圖 6 赫盧赫盧韋—印姆弗魯茲公園(Hluhluwe-iMfolozi park)行程參加成員

一、 赫盧赫盧韋—印姆弗魯茲公園(Hluhluwe-iMfolozi Park)

赫盧赫盧韋—印姆弗魯茲公園前身為赫盧赫盧韋—烏姆福洛濟禁獵區，是非洲最古老的自然保護區，面積約 96,000 公頃之丘陵地形，位於南非夸祖魯—納塔爾省德班之中祖魯蘭往北約 280 公里，公園裡具有豐富之野生動物與完整之生態環境保護、維護工作。所有非洲五霸（獅、非洲象、非洲水牛、豹和黑犀牛）均會出現於此，另公園內有世界上數量最多的白犀牛。參訪時由園區管理單位(The Heritage Tours & Safaris Team)介紹「南非自然保護區相關管理政策」。參訪照片如表 5。

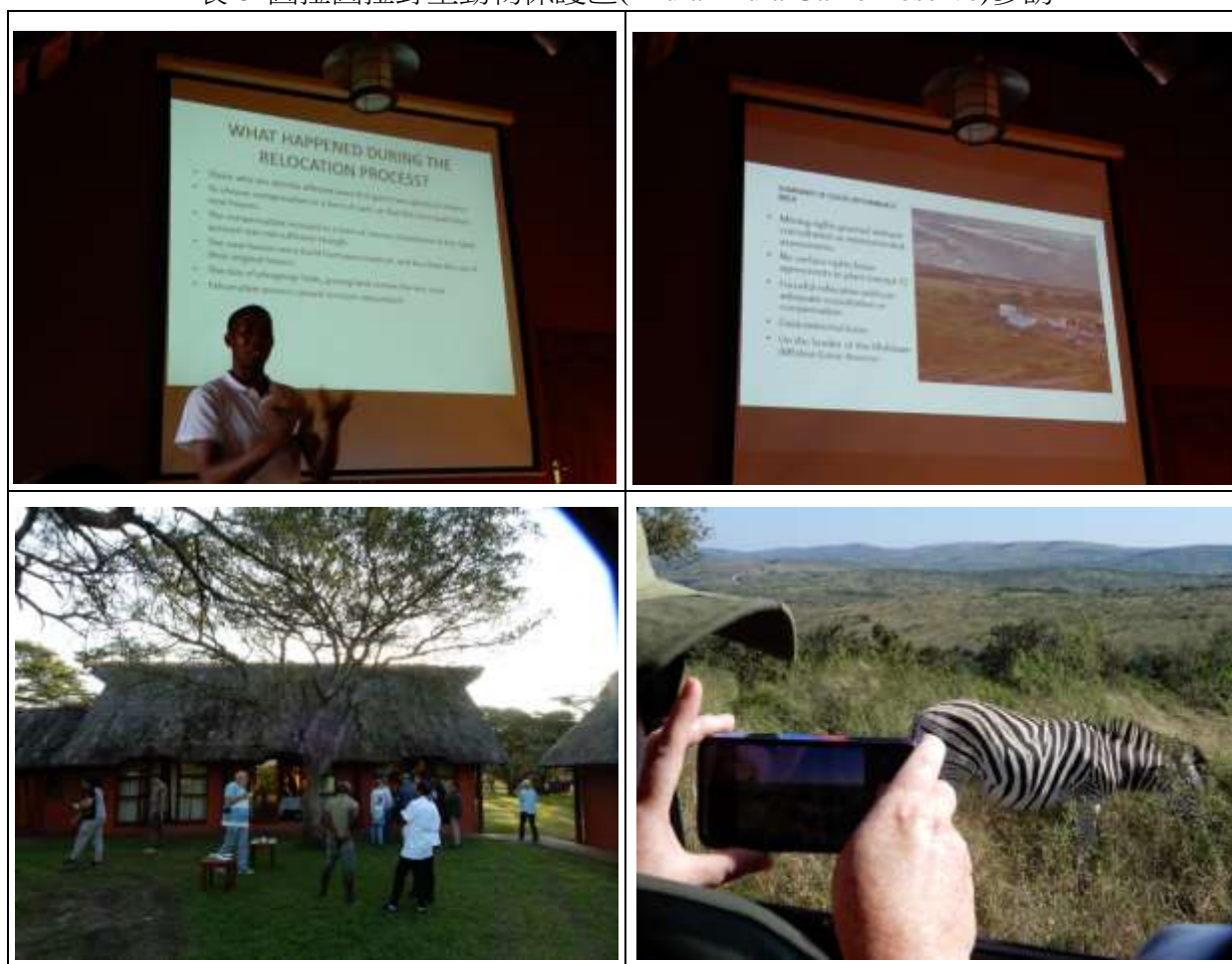
二、 圖拉圖拉野生動物保護區(Thula Thula Game Reserve)

圖拉圖拉野生動物保護區為一私人的動物保護區，總面積 4500 公頃，以前是祖魯族 King Shaka 的私人狩獵場，具歷史悠久之文化與野生動物遺產，自 1911 後才劃設為野生動物保護區，是許多野生動物的家鄉，如大象、水牛、犀牛、豹、獅子、長頸鹿、羚羊及鳥類等。Thula Thula 祖魯語的意思為「和平與安寧」，惟因近年來南非發展經濟，該保護區邊界正遭受當地礦業開發之威脅，許多環保團體正努力抗議訴求停止此礦場開發計畫以保護環境。參訪時，該保護區管理單位邀請一位致力於自然生態保護且長期與礦業開發抗爭之環保人士分享「礦業開發對自然保護區之衝擊」經驗。參訪照片如表 6。

表 5 赫盧赫盧韋—印姆弗魯茲公園(Hluhluwe-iMfolozi Park)參訪



表 6 圖拉圖拉野生動物保護區(Thula Thula Game Reserve)參訪



柒、心得與建議

(一) 本次研討會聚焦探討全球面臨新環境挑戰時，諸如氣候變遷、歐美政權轉移、跨國大量移民(難民)之人權、糧食及能源缺乏與分配不均、各種非自願移居等，國家、社會及環境該如何轉變與治理？轉型過渡期之人權、環境正義如何求得？既存及轉變後之各種不平等或對立如何發現與消弭？影響評估之方式及技術應如何改進才能因應新環境轉變帶來之挑戰？公民參與程度如何界定，是朝向更好或更亂秩序？各國參與人員非常踴躍於分項主題報告會議中發表意見，從「轉型社會之環境風險評估與管理」、「能源永續及城市轉型」、「氣候變遷之環境正義改變及挑戰」、「人權平等、公眾參與及環境正義」、「原住民族及環境正義」、「生物多樣性及生態系統」、「文化遺產保存」、「災害與衝突」、「社會影響評估工具及方法」等多層面向深入探討，並透過實務案例分享，如面對不確定之人類新世代，轉型社會下之公共基礎建設(石油、天然氣、水力發電、礦業等)如何選擇？為達能源永續，如何評估及因

應對於生態系統保護、生物多樣性保育與補償方式、原住民族居民生活權力改變、文化遺產保存、社會影響等，其討論過程中各方提出之開發或治理思維、影響評估方式，或與權益相關民眾團體之溝通機制等，值得我國省思與借鏡，惟涉及層面涵蓋各相關權責機關間之平行溝通、協調與配合，我國未來應花更多精力省思如何降低行政官僚體系之本位主義，以尋求經濟發展、環境保護、社會平等多籌兼顧之策。

- (二) 就我國現行環評法具否決權，及將社會影響評估納入審查之制度架構，與會國外學者、專家抱持又驚又奇態度，中國學者更提出執行方式及可行性之疑義。國際間之社會影響評估程序多設定為「知情」、「溝通」及「協力」等 3 大階段，並將少數民族、原住民傳統領域或保留地之土地使用爭議，或土地開發涉及徵收、迫遷議題，及開發後社會環境與經濟收益變化情形之長期追蹤等納入考量，且社會影響評估著重於政府政策或開發行為規劃階段即落實資訊公開與公眾參與程序，充分讓利害關係人知情，並得配合社會溝通工具，成立受影響族群之專責單位，必要時，得讓利害關係人參與評估各計畫行為對社會環境之可能影響，甚至取得相關資源補助，平行參與個案評估作業，使在地知識充分融入決策參考，提升計畫推動之公正性。然而，考量我國社會影響評估制度、推動背景與國際發展情況不盡相同，在否決權是否回歸目的事業主管機關尚未獲得共識前，環保署仍宜制訂「適用」之社會影響評估技術規範或指引，提供開發單位及相關利害關係人遵循或參酌使用，期許開發行為對利害關係民眾、團體或少數民族、原住民族傳統領域及部落範圍之社會影響，於充分「知情」、「溝通」下，能平行參與評估，且在環評審議過程中受到重視及充分討論，不僅可提升審查判斷之公正客觀性，更能彌補現有環評審查制度之社會影響評估層面之不足。
- (三) 我國環評制度相關資訊公開及民眾參與機制，相較其他國家(如香港，採 E 化管理，建置網路民眾參與平台，提供民眾表達意見等)而言，已屬完善，如「開發行為環境影響評估作業準則」已明定開發單位於辦理環評各階段之資訊公開及民眾參與程序，且相關資訊及環評審議情形均得以透過環保署官方查詢系統獲得或參與旁聽，2016 年更精進首創於開發行為審查會議召開前規劃先至開發在場當地舉辦意見陳述會議及現場勘察，充分蒐集當地民眾團體意見，及環評審議會議採線上直播方式辦理，減輕在地民眾舟車勞頓之辛勞，不僅充分落實資訊公開及民眾參與，也大幅提升民眾參與度，值得持續維持及精進。

- (四) 第 39 屆國際影響評估協會研討會預定於 2019 年 4 月 29 日至 5 月 2 日假澳洲布里斯本(Brisbane)舉辦，主題設定為「進化或變革：影響評估何去何從？」，主要探討政策或專案決定之影響評估進展，與環保署主辦環境影響評估業務後續精進作為相關，建議環保署可派赴 2 名以上同仁參與，得以專注與國外學者專家進行交流及吸取經驗，以納入後續制度推動之參考。



IAIA18

DURBAN SOUTH AFRICA

38th Annual Conference of the International Association for Impact Assessment
16-19 May 2018 | Durban International Convention Center | Durban, South Africa



ENVIRONMENTAL JUSTICE IN SOCIETIES IN TRANSITION

FINAL PROGRAM



Your ideas for improving environmental justice so that development meets the needs of societies in transition are encouraged and welcomed at IAIA18.



Table of contents | Committees

Table of contents

Welcome	3
Mobile app/Social media	4
Award winners	5
Conference overview	6
Daily schedule	8
Technical program overview	10
Special meetings/networking	12
IA primers	14
Plenaries	15
Theme forums	16
Concurrent sessions	18
Posters	40
Exhibitors	42
Annual General Meeting agenda	42
Student/Young Professionals agenda	43
Sponsors/advertisers	44
Index of presenters	49
Maps	51

We appreciate the work of these volunteers, who made this conference possible.
If you meet one of them, please take a moment to say thank you!

CONFERENCE CO-CHAIRS

Ntsako Baloyi, *Coca-Cola Beverages, South Africa*
Sean O'Beirne, *SE Solutions, South Africa*

TECHNICAL PROGRAM COMMITTEE

Francois Retief (chair), *North West University, South Africa*
Reece Alberts, *North West University, South Africa*
Ilse Aucamp, *Equispectives, South Africa*
Jill Baker, *IAIA, Canada*
Nick King, *North West University, South Africa*
Sean O'Beirne, *SE Solutions, Ltd., South Africa*
Marla Orenstein, *Habitat Health Impact Consulting, Canada*
Ana Maria Quintero, *The Nature Conservancy, USA*
Behzad Raissiyan, *Freelance Environmental Planning, Assessment and Management Advisor, Iran*

LOGISTICS & LOCAL ARRANGEMENTS COMMITTEE

Sue George, *IAIAsa, South Africa*
Sabelo Nkosi, *eThekweni Municipality, South Africa*
Sean O'Beirne, *SE Solutions, Ltd., South Africa*
Danielle Sanderson, *Envital, South Africa*
Janice Tooley, *JT Attorneys, South Africa*

SPONSORSHIP/PUBLIC RELATIONS COMMITTEE

Ntsako Baloyi (chair), *IAIAsa, South Africa*
Jill Baker, *IAIA, Canada*
Morgan Hauptfleisch, *Southern African Institute for Environmental Assessment, Namibia*
Sibu Hlela, *Dept. of Environmental Affairs, South Africa*
Sabelo Malaza, *Dept. of Environmental Affairs, South Africa*
Musa Mbhele, *eThekweni Municipality, South Africa*
Sabelo Nkosi, *eThekweni Municipality, South Africa*
Chumisa Thengwa, *eThekweni Municipality, South Africa*

ABOUT THE HOST

It is with great pride that **IAIAsa** is the host for the 2018 IAIA conference in Durban. IAIAsa was established in 1992 and has grown over time to a membership of approximately 650 members. We hold a national conference every year as well as a number of regional branch events.

IAIAsa's main objective is to be a professional association that leads integrated environmental management (IEM) in southern Africa. IAIAsa undertakes various activities in order to: provide a platform for advancing innovation and communication of best practice in IEM; enhance professionalism in the practice; and, advocate for sustainable policies and practices.

ABOUT IAIA

The **International Association for Impact Assessment** was organized in 1980 to bring together researchers, practitioners, and users of various types of impact assessment from all over the world. IAIA members number over 5,000 from over 125 countries, including those from its 17 national affiliates. IAIA activities are carried out locally and regionally through its extensive network of affiliates and branches.

IAIA's Vision: IAIA is the leading global network on best practice in the use of impact assessment for informed decision making regarding policies, programs, plans and projects.

IAIA's Mission: To provide the international forum for advancing innovation and communication of best practice in all forms of impact assessment so as to further the development of local, regional, and global capacity in impact assessment.

IAIA's Values: IAIA promotes the application of integrated and participatory approaches to impact assessment, conducted to the highest professional standards. IAIA believes the assessment of the environmental, social, economic, cultural, and health implications for proposals to be a critical contribution to sound decision-making processes, and to equitable and sustainable development. IAIA is committed to the promotion of sustainability, the freedom of access to information, and the right of citizens to have a voice in decisions that affect them. When we assess the impact of policies, plans, programs, or projects, we promote the free flow of complete, unbiased and accurate information to decision makers and affected parties. We believe that impact assessments should be inclusive and comprehensive, addressing the broader social and health impacts as well as any impacts on the biophysical environment. Respect for human rights and human dignity should underpin all assessments. We acknowledge that we have a duty of care to both present and future generations.

Insurance and Liability: IAIA, the organizing committee, and the venue will not be responsible for medical expenses, accidents, losses or other unexpected damage to property belonging to conference participants, either during or as a result of the conference and during all tours and events. Participants are strongly advised to arrange their own insurance for health and accident, lost luggage and trip cancellation.

Accessibility: Attendees with a disability and/or special accessibility needs were asked to contact IAIA HQ by 15 March to make arrangements. If you have a disability and/or have special accessibility needs and require assistance, please advise IAIA staff at the registration desk. However, we cannot guarantee accommodation of requests made on-site.

Environmental justice in societies in transition

Globally, societies are in transition due to environmental challenges such as climate change, shifts in political power as seen in Europe and the USA, and social changes such as mass migration. All these changes and challenges pose a threat to the sustainability of the physical and human environment, and growing inequality threatens both the social and natural environment.

Although the aim of development is to create a more sustainable environment, the reality is often that only few people benefit while others are left to bear the brunt of the impacts and greater inequality. Environmental management should serve to translate environmental costs into wellbeing benefits for all of humankind and not just the privileged few.

South Africa is a good example of a society in transition where reducing inequality is one of the greatest challenges the country faces. Durban represents a good example of this challenge: the city boasts both plush upmarket residential suburbs and impoverished informal settlements at the other end of the spectrum. Durban also bears the legacy of apartheid planning with historical residential areas in the immediate proximity of large-scale industrial operations. In amongst this all is a rich natural environment in the form of the sea, estuaries, rivers, forests, and wetlands that lie within the city limits.

This is an ideal setting to engage with the conference theme; your participation is invited.

SIYANAMUKELA!*



Ntsako Baloyi

Conference co-chair, IAIA18
Coca Cola Beverages, South Africa

Wow, where did the time go? The international conference has for so long been a dream for us South Africans, and here it is now—a reality. We have been blessed with a veritable army of volunteer helpers, all of whom have contributed to this great event, and we are deeply indebted to them all for that contribution. From the HQ staff through our various committees and our student helpers—a heartfelt thank you to you all for your contribution.

No matter the effort, a conference without delegates is nothing, so it is with great excitement that we welcome you here in Durban and thank you most sincerely for being here. It is our earnest hope that you leave our shores intellectually richer and thinking about when you will visit us again. South Africa remains a truly remarkable country where as soon as we seem to find the answers, we find that the questions have changed.

What we have come to learn is that the world is never saved in grand messianic gestures, but in the simple accumulation of gentle, soft, almost invisible acts of compassion, everyday acts of compassion. In South Africa we have a phrase called *Ubuntu*. *Ubuntu* comes out of a philosophy that says the only way for me to be human is for you to reflect my humanity back at me.

The common bond of humanity and decency that we share is stronger than any conflict, any adversity. Fighting for our convictions is important. But finding peace is paramount. Knowing when to fight and when to seek peace is wisdom. *Ubuntu* was right.

Your presence at the conference will make a contribution to South Africa's unstoppable journey to greatness, from the belief in us by the IAIA Board in awarding us the conference, through to the impact of your spending while here. We have worked hard to give a sparkling technical programme, with authentic South African experiences in the technical tours, welcome reception and cocktail dinner. The rest is up to you, so embrace it and enjoy!

Ubuntu—I am because you are, you are because I am.

*"We welcome you" in Zulu, the home language of Durban.



Sean O'Beirne

Conference co-chair, IAIA18
SE Solutions, South Africa

Mobile app

MOBILE APP AND DESKTOP PORTAL

Experience IAIA conferences in a whole new way!



The mobile app is available from 2 May 2018.

All delegates registered by 20 April received an invitation email to download the app.

If you didn't receive the email:

1. Visit <https://crowd.cc/iaia18> (Desktop or Mobile Web) or <https://crowd.cc/s/1mH90> (Apple or Android)
2. Download the CrowdCompass Attendee Hub.
3. Search for IAIA18 as an event.
4. Log in using "iaia18durban" as the password.

You must be a registered attendee to be able to view the restricted portions of the app such as attendee and speaker contact details.

Keep important parts of the conference at your fingertips.

Use the **Desktop Portal**, the **Mobile App**, or both to:

- » Help others find you—complete your profile and upload a photo.
- » Search for sessions, speakers, and attendees.
- » Select your favorite sessions and create your personal agenda.
- » Download speaker handouts.
- » Take notes and send them to yourself.
- » Use the interactive map function to find rooms.
- » Receive instant notifications of program changes on-site.

Take your changes with you—data syncs between your desktop and mobile versions.

DON'T HAVE A SMARTPHONE? No problem. Use the app on your laptop or iPad.

Access information not included in the final program:

- About conference sessions
- Contact us
- Speaker tips
- General information about IAIA18
- Durban info
- Technical visits

SHARE WITH PHOTOS

Individuals who are attending technical visits are encouraged to take photos and send them to Headquarters staff for posting on IAIA's Facebook page and other uses. Please identify the name of the technical visit, the individuals pictured, and the photographer, and send your photo(s) to info@iaia.org.

If you are posting IAIA18 photos on your Instagram, Facebook, or Twitter account, please tag #iaia18 so the photos can be collected and shared throughout IAIA as well. You can share your photos on the Activity Feed of the IAIA18 app, too!

LIVE TWITTER FEED #IAIA18

Are you keen to share your thoughts on a presentation or reflect on the day's events? Conference participants are encouraged to tweet throughout the event on the hashtag #iaia18.

INTERNET ACCESS

Free wifi is available in the meeting rooms and public spaces of the ICC.

VIDEO/AUDIO POLICY

To foster sharing of information and open discussions, IAIA encourages presenters and panelists to speak freely and respectfully share their knowledge and experiences. During technical sessions, individuals are not permitted to record with personal audio or visual equipment or other recording devices such as cell phones, cameras, or recorders, without permission from the speaker.

Any media attending the event will be designated with a "MEDIA" name tag. Media will be allowed to take photographs, notes, and interviews, but video/audio recording by media will be allowed only during the opening and closing plenaries. Any recording by media during technical sessions requires prior permission from the speaker.

By attending the conference, you agree to allow your image to be used by IAIA.

As a courtesy to all speakers and to help reduce disruptions, we kindly ask that you remain in the session you're attending for all presentations. Thank you for your consideration.

THE DANISH
INSTITUTE FOR
HUMAN RIGHTS

Global Award

The **Danish Institute for Human Rights** was chosen to receive the Global Award for developing and improving methodologies, tools, and guidance documents that promote and support human rights impact assessment and the integration of human rights principles and considerations in other branches of impact assessment.

The Global Award is presented annually to a leading individual or institution that has made a substantial contribution to the practice of environmental assessment, management or policy at a global scale.



Lifetime Achievement Award

Iara Verocai receives the Lifetime Achievement Award for her sustained and significant contributions to Environmental Impact Assessment, from her pioneering introduction of EIA in Brazil to her consulting and capacity building work throughout Latin America and the world.

The IAIA Lifetime Achievement Award, previously known as the Rose Hulman Award, is awarded to long-term supporters and members of IAIA for major contributions to the field of impact assessment.



SABIN CENTER FOR
CLIMATE CHANGE LAW

Institutional Award

The **Sabin Center for Climate Change Law** was chosen to receive the Institutional Award because of its significant work on climate change and the law governing environmental impact assessment, such as its legal efforts aimed at advancing the use of EIA as a tool for climate change analysis, mitigation, and adaptation planning.

The IAIA Institutional Award is presented to a national or international government or nongovernmental organization for outstanding contribution to impact assessment practice or other environment-related activity deserving of recognition.



Regional Award

The team comprising the **South African National Department of Environmental Affairs (DEA)**, the **Council for Scientific and Industrial Research (CSIR)**, and the **South African National Biodiversity Institute (SANBI)** was selected as the joint recipient of the Regional Award for its work advancing and innovating Strategic Environmental Assessment in South Africa over the past five years via national-scale SEAs in the energy sector.

The IAIA Regional Award is awarded to an individual or organization that has made a substantial contribution to the field of impact assessment and/or has taken a leadership role in promoting best practice in impact assessment within the general world region of the location of the conference for that year.



Individual Award

Nicholas King was selected for the Individual Award for his ongoing and sustained contributions to the field of Environmental Impact Assessment, including his dedication to global environmental change and futures visioning.

The IAIA Individual Award acknowledges personal contribution to the discipline of impact assessment. It recognizes major achievement and advancement in theory and/or practice over a period of time at an international level.



Outstanding Service to IAIA

The Outstanding Service to IAIA Award is presented to **John Boyle** for his contributions and commitment to IAIA, displayed through his years of service leading the Training and Professional Development Committee and developing/implementing the new Professional Development Program.

The IAIA Board of Directors selects the recipient of the Outstanding Service to IAIA Award, which recognizes one or a small number of key individuals within IAIA who have provided exceptional service to IAIA as an organization over a number of years.



Rita R. Hamm IA Excellence Scholarship

Greg Schreiner was selected as the recipient of this year's Rita R. Hamm IA Excellence Scholarship. Greg is a PhD student in the Department of Science at University of the Witwatersrand (South Africa) and a Senior Sustainability Scientist at Council for Scientific and Industrial Research (South Africa).

The Rita R. Hamm IA Excellence Scholarship, in honor of the legacy that IAIA's former CEO left on the organization and the field of impact assessment, is offered in conjunction with each annual IAIA conference, allowing a young practitioner in the region of the host country to attend.



IAPA Best Paper of 2017

Two papers were selected this year:

Susie Brownlie, Amrei von Hase, Mark Botha, Jeffrey Manuel, Zoe Balmforth, and Nicky Jenner, for their paper "Biodiversity Offsets in South Africa – Challenges and Potential Solutions." IAPA 35(3) 248-256.

A. John Sinclair, Timothy J. Peirson-Smith, and Morrissa Boerchers for "Environmental Assessments in the Internet Age: The Role of E-governance and Social Media in Creating Platforms for Meaningful Participation." IAPA 35(2) 148-157.

If you would like to nominate an individual or organization for a 2019 award, please submit name and justification to shell@iaia.org.

Online nominations will open soon.

Conference overview

REGISTRATION DESK HOURS

Sunday 13 May	15:00-17:00
Monday 14 May	06:30-10:00, 15:00-17:00
Tuesday 15 May	06:30-10:00, 15:00-17:00
Wednesday 16 May	07:30-17:00
Thursday 17 May	08:30-16:30
Friday 18 May	08:30-16:30
Saturday 19 May	08:30-14:30

Program Overview

	Pre-conference Sunday 13 May	Pre-Conference Monday 14 May	Pre-Conference Tuesday 15 May	Conference Day 1 Wednesday 16 May
06:30		Registration for training courses and technical visits		
07:00		Technical visits	Registration	
07:30			Technical visits	
08:00				Registration
08:30				Students & young professionals workshop
09:00		Training courses	Training courses	Special meetings
09:30				Exhibits & posters setup
10:00				
10:30				
11:00				
11:30				
12:00				
12:30				
13:00				Opening plenary
13:30				Exhibits & posters
14:00				
14:30				Break
15:00	Registration for training courses and technical visits	Registration for training courses and technical visits	Registration	Concurrent sessions
15:30				
16:00				
16:30				Welcome reception
17:00				
17:30				
18:00				
18:30				
19:00 onward				

Conference overview

SHUTTLE BUS HOURS

Monday 14 May	07:15-08:45	17:15-18:45
Tuesday 15 May	07:15-08:45	17:15-18:45
Wednesday 16 May	11:15-12:45	17:45-19:15
Thursday 17 May	07:15-08:45	18:00-19:30
Friday 18 May	07:15-08:45	18:00-19:30
Warehouse	18:30-20:00	21:30-23:00
Saturday 19 May	08:15-09:45	18:00-19:30

SHUTTLE BUS

During the times at left, a shuttle bus will run a continuous loop consisting of the ICC and the Southern Sun Elangeni & Maharani Hotel, the Garden Court Marine Parade Hotel, the Garden Court South Beach, and the SunCoast Hotel & Towers.

A "people mover" shuttle will also run from these hotels to the Warehouse and back the evening of Friday 18 May for the cocktail dinner.

Conference Day 2 Thursday 17 May		Conference Day 3 Friday 18 May		Conference Day 4 Saturday 19 May		Post-Conference Sunday- Monday 20-21 May	
							06:30
							07:00
	Committee meetings		Committee meetings				07:30
							08:00
							08:30
Registration	Theme forums	Registration	Theme forums	Registration	Theme forums		09:00
							09:30
	Break		Break		Break		10:00
							10:30
	Concurrent sessions		Concurrent sessions		Concurrent sessions		11:00
							11:30
	Poster session		Annual General Meeting		Council meeting		12:00
							12:30
	Lunch		Lunch		Lunch		13:00
							13:30
	Concurrent sessions		Concurrent sessions		Concurrent sessions		14:00
							14:30
	Break		Break		Break		15:00
							15:30
	Concurrent sessions		Concurrent sessions		Closing plenary		16:00
						Exhibits & posters dismantle	16:30
	Section meetings		Section meetings				17:00
							17:30
			Cocktail dinner				18:00
							18:30
							19:00 onward

Daily schedule

SUNDAY 13 MAY

15:00-17:00 **Registration** (ICC Main Entrance)

MONDAY 14 MAY

06:30-10:00 **Registration** (ICC Main Entrance)

07:00-18:00 **Technical visit A: Spring Grove Dam***

07:00 depart **Technical visit D: iSimangaliso Wetland Park***

07:00 depart **Technical visit E: Maloti-Drakensberg World Heritage Tour***

08:00-16:30 **Investing in Natural Capital in Urban Areas** (22ABC)

09:00-17:00 **Training courses**
Public Participation in IA (21ABC)
Using Organized Reasoning (12A)
Multilevel Approach for Biodiversity (12B)
Strategic Thinking in SEA/IA (12C)
Human Rights and IA (21G)
Resettlement as Part of IA (21DEF)
Cumulative Effects Assessment (12D)

15:00-17:00 **Registration** (ICC Main Entrance)

TUESDAY 15 MAY

06:30-10:00 **Registration** (ICC Main Entrance)

07:00-16:00 **Technical visit F: Ingula Pumped Storage Scheme ***

09:00-17:00 **Integrating Climate Change Considerations in Impact Assessment: Interlinks with Environmental and Social Impacts** (22ABC)

09:00-17:00 **Training courses**
Undertaking Inclusive ESIA's (21ABC)
Using Organized Reasoning (12A)
Multilevel Approach for Biodiversity (12B)
Strategic Thinking in SEA/IA (12C)
Human Rights and IA (21G)
Resettlement as Part of IA (21DEF)
Cumulative Effects Assessment (12D)

15:00-17:00 **Registration** (ICC Main Entrance)

WEDNESDAY 16 MAY

07:30-17:00 **Registration** (ICC Main Entrance)

08:00-11:45 **Students and Young Professionals workshop** (21ABC)

08:30-10:00 **Impact assessment primers**
Agriculture, Forestry, and Fisheries (12C)
Biodiversity and Ecology (12D)
Corporate Stewardship and Risk Management (22ABC)
Disasters and Conflict (22G)
Public Participation (12A)

09:00-12:00 **World Bank Group Day** (Hall 2A)

09:00-12:00 **EHSS Risk Management in Project Finance: An IFI Perspective** (21DEF)

10:30-12:00 **Meet the Instructors** (21G)

* Technical visit participants: Please meet at the main entrance to the ICC, by the rhino statue, a minimum of 15 minutes prior to departure.

(Wednesday continued)

10:30-12:00 **Impact assessment primers**
Climate Change (12C)
Cultural Heritage (12D)
Health (22ABC)
Indigenous Peoples (22G)
Social Impact Assessment (12A)

Note: No lunch is provided.

13:00-14:30 **Opening plenary** (see page 15) (Hall 1)
Sponsored by Department of Environmental Affairs (DEA)

14:30-15:00 **Break** (Hall 2CDE) Sponsored by DEA

15:00-16:30 **Concurrent sessions**

16:45-18:15 **Welcome reception** (Foyer and Courtyard)
Sponsored by eThekweni Municipality

THURSDAY 17 MAY

07:00-08:30 **Affiliates, Branches, & Associated Organizations Forum** (22G)

07:30-08:30 **Committee meetings**
IAPA Editorial Board (12A)
Awards Committee (12C)
Board Nominations Committee (12D)

07:30-08:30 **Section meeting**
Students and Young Professionals (21G)

08:30-16:30 **Registration** (ICC Main Entrance)

09:00-10:30 **Theme forums**

10:30-11:00 **Break** (Hall 2CDE) Sponsored by eThekweni Municipality

11:00-12:30 **Concurrent sessions**

12:40-13:30 **Poster session** (Hall 2CDE)

12:40 **Book launch: Environmental Management in South Africa** (Hall 2A)

13:30-14:20 **Lunch** (Hall 2CDE)

14:30-16:00 **Concurrent sessions**

16:00-16:30 **Break** (Hall 2CDE)

16:30-18:00 **Concurrent sessions**

18:10-19:10 **Section Meetings**
Agriculture, Forestry, and Fisheries (12A)
Disasters & Conflicts (12C)
Corporate Stewardship and Risk Management (12D)
Health (22G)
Cultural Heritage (21G)
Governance & Implementation Systems (22DEF)
Public Participation (22ABC)

Coffee breaks and lunches

Based on the data collected via registration forms, IAIA arranged for a percentage of vegetarian meals. This does not guarantee accommodation of individual preference. All food is being prepared halal.

Note: Lunch is NOT provided on 16 May.

FRIDAY 18 MAY

07:30-08:30	Committee meetings IAPA Journal Management Committee (12A) Training & Professional Development Committee (12C) Sections Coordinating Committee (12D)
08:30-16:30	Registration (ICC Main Entrance)
09:00-10:30	Theme forums
10:30-11:00	Break (Hall 2CDE)
11:00-12:30	Concurrent sessions
12:40-13:30	Annual General Meeting and Lifetime Achievement Award Presentation (11) All conference participants are encouraged to attend the annual business meeting of the Association. Meet the IAIA Board of Directors, hear the Treasurer's report, and be present for the prestigious Lifetime Achievement Award recipient's acceptance speech.
12:40-14:20	Lunch (Hall 2CDE)
14:30-16:00	Concurrent sessions
16:00-16:30	Break (Hall 2CDE)
16:30-18:00	Concurrent sessions
18:10-19:10	Section Meetings Biodiversity & Ecology (21G) Indigenous Peoples (12C) Climate Change (22DEF) Social Impact Assessment (22G)
19:00-23:00	Cocktail dinner (The Warehouse; see pages 13, 51) <i>Sponsored by eThekweni Municipality</i>

SATURDAY 19 MAY

08:30-14:30	Registration (ICC Main Entrance)
09:00-10:30	Theme forums
10:30-11:00	Break (Hall 2CDE)
11:00-12:30	Concurrent sessions
12:40-13:30	Council meeting (21G) The Council is an advisory resource for the Board. Committee chairs, Section coordinators, Affiliate and Branch representatives and conference program chairs for current and future conferences comprise the Council. All members are encouraged to attend and meet the leadership of IAIA. Presentation of the Outstanding Service Award.
12:40-14:20	Lunch (Hall 2CDE)
14:30-16:00	Concurrent sessions
16:00-16:30	Break (Hall 2CDE)
16:30-17:30	Closing plenary (see page 15) (Hall 2BH)
16:00-19:00	Exhibit and poster dismantle

SUNDAY 20 MAY

07:00 depart	Technical visit K: Hluhluwe-Imfolozi Park*
08:00 depart	Technical visit J: Wild Coast and Community Walking Tour*

TECHNICAL PROGRAM: TOPICAL STREAMS

The technical program is structured into two streams: (1) thematic sessions focusing on environmental justice in societies in transition, and (2) general impact assessment sessions, including topics that address issues of interest to IAIA's special-interest Sections. Each morning, all delegates are invited to participate in a select number of theme forums, sessions which focus on cross-cutting issues relevant to the many specialties of impact assessment with topics that engage the conference theme.

Conference theme

Assessing & managing environmental risks in societies in transition.....	18
Contribution of IA to human wellbeing.....	20
Ecosystem services, health, livelihoods, & environmental justice.....	22
Energy and societies in transition	22
Environmental justice challenges of climate change.....	23
Human rights, equality, & environmental justice.....	24
Indigenous Peoples & environmental justice.....	25
Public participation & environmental justice	25

IAIA Section and general topics

Agriculture, forestry, & fisheries	26
Biodiversity & ecology.....	27
Climate change	30
Corporate stewardship & risk management	30
Cultural heritage.....	31
Digital IA.....	31
Disasters & conflicts.....	32
Extractive resources	32
Governance & implementation	32
Health IA	33
Indigenous Peoples.....	33
Power generation & transmission	33
Professional development & capacity building in IA.....	33
Public participation	35
Renewable energy	36
SIA	36
Tools and methods.....	37
Special to IAIA	38

Technical program overview

- Plenary
- Theme forum
- Concurrent session

	Hall 1	Hall 2BH	Hall 2A	Room 11	Room 21ABC	Room 21DEF
Wednesday 16 May						
13:00-14:30	Plenary					
15:00-16:30		Using organized reasoning to improve impact assessment: Building capacity (p34)	Country experiences with environmental justice in practice: Oil & gas (p22)	DEA: The harmonization of EIA in the SADC region (I) (p32)	Assessing the capacity to manage environmental and climate change risks (p18)	A rights-based approach to FPIC and HRIAs: Lessons from the field (p24)
Thursday 17 May						
09:00-10:30		Understanding stakeholder expectations in IA (p16)	Toward improved implementation of biodiversity offsets (p16)	Resilience in infrastructure planning and assessment (p16)	DEA: The harmonization of EIA in the SADC region (II) (p32)	
11:00-12:30		Negotiating environmental justice with stakeholders (p35)	SEA as a tool for radical reform (p19)		Climate change and IA: Good practice cases (I) (p30)	Diagnostic tools for country ESIA systems: An update (p37)
12:40-13:30	Poster Session					
14:30-16:00		Impact assessment, decision making, and change (p20)	China's EIA process: Adapting for sustainable future (I) (p37)		Climate change and IA: Good practice cases (II) (p30)	Disasters, conflict, other crises, and IA (p32)
16:30-18:00		Quality and Effectiveness of IAs (p21)	China's EIA process: Adapting for sustainable future (II) (p37)		Energy justice: Beyond climate & environmental justice (p23)	Online IA training: Experiences, lessons learned, and the future (p33)
Friday 18 May						
09:00-10:30		Decision-making in an uncertain world: Welcome to the Anthropocene (p16)	International finance: The role of independent accountability mechanisms (p16)	ELA theme forum: Legal perspectives on environmental (in)justice (p16)		
11:00-12:30		Whose canary in whose coal mine? A hypothetical (p20)	Planning for and implementing>NNL/NG of biodiversity goals (I) (p29)	Mechanisms for biodiversity conservation (I) (p28)	Effective PP in extractive industries and energy sector (I) (p25)	Building local capacity for meaningful stakeholder engagement (p24)
12:40-13:30	Annual General Meeting					
14:30-16:00		SEA practice for regional and land use planning: Examples from Africa and Asia (p19)	Planning for and implementing>NNL/NG of biodiversity goals (II) (p29)	Mechanisms for biodiversity conservation (II) (p29)	Effective PP in extractive industries and energy sector (II) (p25)	Community participation in governance processes for reduced vulnerability (p22)
16:30-18:00		The oil & gas industry and environmental justice in practice (p23)	Toward effective implementation of the mitigation hierarchy in EIA process: Case examples (p29)	Do biodiversity offsets deliver equitable outcomes? (p28)	Effective PP in extractive industries and energy sector (III) (p26)	A systems approach to SEA capacity development (p34)
Saturday 19 May						
09:00-10:30		Involuntary resettlement: Social license to operate (p17)	Exploring the relationship between quality and justice (p17)	Hydropower: Meeting the sustainability challenge (p17)		
11:00-12:30		Equality in IA and involuntary resettlement (p24)	EIA effectiveness for infrastructure developments in Africa (I) (p18)	Sustainable hydropower: Best practice examples (p36)	Digital IA: The latest developments (p31)	Social license to operate: Expectations of communities vs. corporates (p30)
12:40-13:30	Council Meeting					
14:30-16:00		Eish! African World Café: What are your Big Five? (p34)	EIA effectiveness for infrastructure developments in Africa (II) (p18)	Example reforms of environmental permitting and review (p32)	Digital innovation: Experiences with developing IA online platforms (p31)	Institutional capacity = Enhanced SDG outcomes (p35)
16:30-17:30		Plenary				

Technical program overview

Room 22ABC	Room 22DEF	Room 21G	Room 22G	Room 12A	Room 12C	Room 12D
Impact assessment: Its role in triggering conflict and using mediation (p38)	Hits of the 1980s: Insights from the formative years of IA (34)	Infrastructure financing & EIA: Managing risk & the public interest (19)	CLEAA Africa Professional Development Fellows Program (p34)	Environmental justice: Options for coastal communities (p26)	Professional development and capacity building in IA (p35)	IA best practice in mining: Lessons learned (p22)
Improving environmental & social performance on construction projects (I) (p18)	Improving environmental justice in IA through PP (I) (p26)	International progress in regional-scale impact assessment (p20)	Improved integration of land acquisition & resettlement expertise in ESIA (p20)	Regional conservation assessments: Value, process, and case studies (p29)	Power-sector ESIA: Good practice examples & guidelines (p33)	UN Environmental and Social Sustainability (ESS) Framework: Enabling SDGs (p19)
Poster Session						
Improving environmental & social performance on construction projects (II) (p19)	Improving environmental justice in IA through PP (II) (p26)	Is the oil & gas industry ready to prioritize environmental justice? (p23)	Economic displacement and livelihood restoration (p36)	HRIA in the agricultural sector: A case learning session (p27)	Registration and certification of IA practitioners (p35)	IA and biodiversity (p28)
And now the good news (p34)	Practical aspects of public participation (p36)	Experiences with SEA in the oil and gas sector (p32)	Policy and program impacts assessment (p36)	Great Scott! New thinking in IA (p20)	Are the SDGs an opportunity to guide a regulatory framework for HIA? (p33)	Meet the editor (p38)
Independent panels for helping address environmental challenges (p38)	Reforming IA law in Canada: Moving to the next generation? (I) (p21)	Enhancing DRR and community resilience: What role ESIA can play (p32)	SEA's role in transitions to sustainability, endorsing SDGs (p21)	Shaping of a perfect HIA: Barriers in achieving the same (p33)	Enriching ES(H)IAs with the natural & social capital concept (p33)	IAIA's climate change and impact assessment next steps (p30)
Annual General Meeting						
Environmental justice in IA: Case studies in guidance and practice (I) (p37)	Reforming IA law in Canada: Moving to the next generation? (II) (p21)	Where did it all go wrong? An honest look at lessons learned in ESIA (p35)	Coordinating national and international ESIA to ensure streamlining (p34)	Environmental justice & the pursuit of sustainable cities (p18)	HIA and health in EIA: Legislation and implementation (p33)	Greening the transport sector through smart plans and eco-friendly designs (p28)
Environmental justice in IA: Case studies in guidance and practice (II) (p38)	Reforming IA law in Canada: Moving to the next generation? (III) (p21)	IA and Sustainable Development Goals (p35)	Integrated strategic environmental assessments for post-crisis recovery (p32)	Psycho-social impact in support of environmental justice (p20)	Aashukan, one year later (p33)	Tiering of SEA/EIA in relation to energy infrastructure plans (p23)
Implementing renewable energy projects within complexity (p36)	Assessing cultural heritage significance and risk (p31)	Applying resilience thinking in IA (p22)	Indigenous & vulnerable people, CH, and health (p24)	IA and agriculture (p27)	Biodiversity offsets and people (I) (p27)	Social justice and community participation in IA (p25)
Council Meeting						
Integrated IA for addressing Africa-specific challenges in extractives (p23)	Managing cultural heritage in urban & rural landscapes (p31)		Applying the mitigation hierarchy to address marine biodiversity impacts (p27)	Informing enviro-cultural justice in IA (p25)	Biodiversity offsets and people (II) (p27)	EIA Follow-up best practice principles (p38)

Special meetings and networking activities

INVESTING IN NATURAL CAPITAL IN URBAN AREAS

Discuss the key challenges to scaling up community ecosystem- and green economy-based solutions in urban areas. Highlight any risk areas which may catalyze ecosystem-based adaptations with transformative socio-economic outcomes.

Monday, 14 May | 08:00-16:30 | 22ABC
Pre-registration by 20 April required.

INTEGRATING CLIMATE CHANGE CONSIDERATIONS IN IMPACT ASSESSMENT: INTERLINKS WITH ENVIRONMENTAL AND SOCIAL IMPACTS

The aim of this training is to familiarize practitioners with the interlinkages between climate change, environment, and social impacts. It will guide participants through decisions around when and how to integrate climate change considerations into impact assessment and to identify and realize opportunities to achieve positive outcomes.

Tuesday, 15 May | 09:00-17:00 22ABC
Pre-registration by 20 April required.

STUDENTS AND YOUNG PROFESSIONALS (SYP) WORKSHOP

The SYP Section invites early career IA researchers, practitioners, and post-graduate students to a half-day workshop to present their work, listen to seasoned IA practitioners and academics speak about their career path, and participate in a speed-mentoring activity. Stay connected by attending other SYP social activities during the week.

Wednesday, 16 May | 08:00-11:45 | 21ABC
Pre-registration by 20 April required.

WORLD BANK DAY: IMPLEMENTATION OF THE ENVIRONMENTAL AND SOCIAL FRAMEWORK

The World Bank's new Environmental and Social Framework (ESF) will go into effect in late 2018. It includes a standard dedicated to labor and working conditions, detailing the requirements that borrowers will satisfy in World Bank-financed projects. This event provides a brief update on the status of the roll-out of the ESF, including guidance material that is currently being developed. We will then discuss the specific labor provisions included in the ESF and will focus, in particular, on occupational health and safety as well as child and forced labor. The presentation of the World Bank's ESF will be accompanied by reports from practical case studies.

Wednesday, 16 May | 09:00-12:00 | Hall 2A
Pre-registration by 20 April required.

MEET THE INSTRUCTORS

Meet and communicate with some of the IAIA training course instructors and Training and Professional Development Committee (TPDC) members, directly ask your questions, and raise any concerns and expectations about IAIA training. The IAIA TPDC will also explain how the Committee works, the process of evaluating and offering courses, and ways in which members can take part.

Wednesday, 16 May | 10:30-12:00 | 21G
Pre-registration by 20 April required.

IMPACT ASSESSMENT PRIMERS

Do you want to know a little bit about a specific topic of impact assessment before the conference begins? Is there an area of impact assessment that you've heard about but are not quite sure what it involves? Are you coming to the conference hoping to learn more about a specialty area, but aren't certain if it's where you should spend your time this week? Do you want to know more about IAIA's Sections and start your networking early by meeting delegates before the conference begins? If you answered "yes" to any of these questions, consider participating in the *Impact Assessment Primers*.

Join members of IAIA's Sections for 90-minute introduction sessions where seasoned IAIA members, experts in their field, will provide you with a brief introduction to the topic, an introduction to the Section and its activities, advice and information on which IAIA18 sessions are related to the topic, and how you can start to build your capacity in that area.

Wednesday, 16 May | 08:30-12:00
See page 8 for locations.

EHSS RISK MANAGEMENT IN PROJECT FINANCE: AN IFI PERSPECTIVE

This workshop intends to build participant capacity by familiarizing attendees with International Financing Institution (IFI) environment, health, safety, and security (EHSS) standards, good practices and emerging issues, the role of environmental and social impact assessment (ESIA) in IFI banking and investment processes, and the requirements behind developing bankable ESIA's. Specifically, the workshop will include the following:

- An overview of applicable IFI and international EHSS legislation and requirements (e.g., European Bank for Reconstruction and Development (EBRD), International Finance Corporation (IFC), World Bank (WB), African Development Bank (AfDB), Equator Principles Financial Institutions (EPFIs) and Export Credit Agencies (ECAs)) to develop "bankable projects."
- EHSS due diligence requirements of the EBRD and other IFIs with which the Bank co-finances or syndicates deals. This will cover the full internal appraisal and due diligence process carried out by IFIs, including project categorization, EHSS due diligence planning, the auditing and analysis process, use of independent third party consultants, etc.
- An overview of banking and investment processes and the differences in the environmental and social implications related to differing investment types (debt vs. equity, bonds, lending facilities, and the leverage available in differing scenarios).
- The legal mechanisms through which the Bank and IFIs agree on, covenant, and ensure actions designed to manage risk and drive compliance with policy. This will include loan documentation tools such as representations and warranties, covenants, conditions precedent and subsequent, and the use of Environmental and Social Action Plans (ESAPs).
- Emerging EHSS issues currently being explored through ongoing and collaborative IFI environmental and social (E&S) working groups.
- Project monitoring and evaluation: annual E&S reporting and evaluation, key performance indicators, and outcomes.
- IFI independent recourse/complaints mechanisms.

Wednesday, 16 May | 09:00-12:00 | 21DEF
Pre-registration by 20 April required.

Special meetings and networking activities

"POP UP" MEETINGS

Do you need to meet with colleagues? Continue a discussion? Get together with a potential business partner or client? Meeting room 12B is available on a first-come, first-served basis for small meetings that "pop up" during the conference. Check the schedule on the room for available times and sign up.

16-19 May | 09:00-18:00 | 12B

WELCOME RECEPTION

For the welcome reception, we are planning to show a little of the famous South African hospitality. The event will aim to showcase the extraordinary cultural diversity in South Africa and Durban specifically. It will offer the opportunity to catch up with old friends and hopefully make some new ones all from the comfort of the conference venue, so no need to arrange transport. You will leave the meet-and-greet inspired for the conference and hopefully with some insight into what makes Durban and South Africa as a whole so remarkable.

Wednesday, 16 May | 16:45-18:15
ICC foyer and courtyard

AFFILIATES FORUM

IAIA Affiliates, Branches, and Associated Organizations broadening our reach for professional benefit to each. Meet with all of the representatives. It's about sharing ideas from across the globe toward building a community of professional practice. Bring your poster. Share your needs. Tell us your aspirations. Summarize your challenges. Together let's build relationships.

Thursday, 17 May | 07:00-08:30 | 22G

BOOK LAUNCH

Join Jutta Law for a launch of *Environmental Management in South Africa, 3rd Edition*, edited by ND King, HA Strydom, and FP Retief. Editors Nicholas King & Francois Retief will present this exciting new edition.



Drop your business card at the Jutta booth for a chance to win a copy of the book. Drawings will take place during the book launch and at the closing plenary.

Thursday, 17 May | 12:40 | Hall 2A

COCKTAIL DINNER

IAIA delegates asked for a more informal, networking-friendly banquet evening ... here it is! Join your colleagues and friends for a "cocktail dinatoire" (walking dinner).

This African-inspired cocktail event will provide networking opportunities in a contemporary urban South African setting. Conference goers will experience the diversity of food, dance, and music of the many Durban cultures, all brought together through the spirit of *Ubuntu*. *Ubuntu* is a powerful African philosophy translated as "I am because we are" or the spirit of community. We invite you to immerse yourself!

Friday, 18 May | 19:00-23:00
The Warehouse, 82 Hunter Street
Pre-registration by 20 April required.
See page 7 for shuttle bus times.

LEGACY PROJECT

The Entuthukweni Primary School in Lamontville, South of Durban is located next to the Mobeni Industrial area. Over the years, the children have been exposed to industrial pollution that is affecting the entire South Durban Basin. The school has no air conditioning, forcing the classrooms to be kept open to the Durban heat, even when emissions from the industrial area are extreme. The fencing at the school is also lacking, exposing children to dangers of crime and being run over by traffic. IAIA donates \$5 of each conference registration to a worthy cause. With the conference theme of "Environmental Justice in Societies in Transition," the IAIA18 Committee felt that this school is a worthy recipient of a donation. The school can use the money to purchase fans for the classrooms as well as do something about the fencing.

SUSTAINABLE CONFERENCES

IAIA takes the following steps to mitigate the impacts of our conferences:

- Limit printed materials; communicate via e-mail and Web to the extent practical and possible.
- Contract with venues that participate in green programs (e.g., hotels that provide a linen and towel reuse program).
- Use bulk servings and pitchers rather than individual bottles; use china and silverware rather than disposables.
- Provide recycling bins for discarded paper products
- Ask delegates to confirm their attendance at events and functions to reduce waste and leftovers.
- Encourage delegates to purchase carbon-offset credits for their flights.
- Encourage delegates to return name badge holders.

SKATE UBUNTU

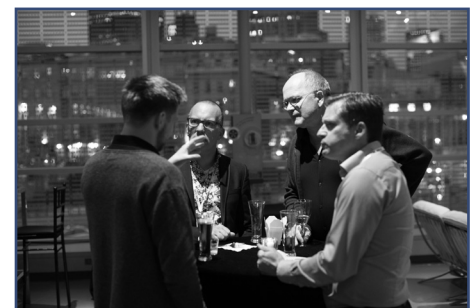
Skate Ubuntu is a student initiative at Rhodes University in Grahamstown. Through the appeal of skateboarding, the student group hopes to create opportunities for kids from Joza township to mix and socialize with kids from Grahamstown. In order to do so, the group is raising money to build a skatepark on land situated between the two urban centers. They are also raising money to buy skateboards and safety gear, so that the skateboarding is both fun and safe.

To raise money for the initiative, Sean O'Beirne (Conference Co-chair) has made a carving knife and fork that will be raffled at the conference. The knife and fork set is etched with the IAIA18 logo and the handles are made of "sneezewood." The wood, after sawing or sanding, produces highly irritant, aromatic peppery oils that cause violent sneezing. Sneezewood (*Ptaeroxylon obliquum*) is extremely hard and durable and highly valued as a timber for fence posts, buildings, and railway sleepers. The wood for these handles was sourced from an old fence post.

Raffle tickets are on sale at R100. The draw will take place at the closing plenary and you do NOT need to be there to claim your prize.

Tickets may be purchased at the entrance to Hall 2CDE.

Drawing to be held during closing plenary.



Impact assessment primers

IAIA's special-interest Sections are comprised of exciting and hardworking members who work together in their related field to promote and improve their work on topics and areas including social impact assessment, climate change, biodiversity, and much more!

The purpose of these introductory sessions is to give you an inside look into how these experts contribute to the IAIA community on their related topic and are applying rigorous solution sets and best practices. This is also a chance to learn how you can become a member of a Section and become proactive in the IAIA community. Join us!

WEDNESDAY 16 MAY

08:30-10:00

Agriculture, Forestry and Fisheries (12C)

The "invisible" impact drivers

Few governments regulate AFF activities—we promote impact assessment in our sectors internationally and nationally and seek to ally with local and regional groups interested in promoting this work.

Chair: Ijeoma Vincent-Akpu

Biodiversity and Ecology (12D)

Biological and ecological knowledge: The foundation of sustainable development

An overview of the Biodiversity and Ecosystem Section's activities, plus the use of biodiversity and ecological information to guide environmental review, IA, and mitigation options will be discussed. Areas where practices are advancing will be reviewed, along with opportunities and challenges to mainstream this work in the future. Information from the "Mainstreaming the Mitigation Hierarchy in Impact Assessment" IAIA Special Symposium will be summarized.

Chair: Denny Grossman

Corporate Stewardship & Risk Management (22ABC)

Being human in impact assessment

The CSRSM section chairs welcome you to IAIA18, starting with an introduction to the Section, with a focus on human rights in impact assessment and vulnerable groups. Through an interactive session, the chairs will share key challenges and lessons learnt from recent experiences working with companies, followed by a Q&A with the members.

Chairs: Nora Gotzmann, Michele Gilbert, & Tulika Bansal

Disaster and Conflict (22G)

Disasters, conflict, and the environment: Why it is important

Focused on immediate threats to life and welfare, the Disaster & Conflict Section seeks to understand disaster-and-crisis environmental impacts to reduce lives lost and promote sustainable recovery.

Chair: Charles Kelly

Public Participation (12A)

Engaging impact assessment

Public participation as if it mattered. Exploring the role, function and opportunities through games and play.

Chairs: John Sinclair, Timothy Peirson-Smith, & Tanya Burdett

10:30-12:00

Climate Change (12C)

Climate change and impact assessment

The aim of this session is to inform you about the methods to integrate climate change in impact assessment and application of a method by you in a practical case in a working group.

Chairs: Arend Kolhoff & Nick King

Cultural Heritage (12D)

Introduction to Cultural Heritage Section

This session will provide an introduction to the role of cultural heritage in IAIA specifically, and more generally to integrating cultural heritage into impact assessment and the development process.

Chairs: Arlene Fleming & Chris Polglase

Health (22ABC)

Health in impact assessment: Concepts and practice

The session will introduce basic and important concepts and methodologies to facilitate why health may be important to consider in impact assessment, when, why, and what outputs may look like.

Chairs: Geetha Ramesh & Mark Divall

Indigenous Peoples (22G)

Impact assessment and Indigenous Peoples: Assessing impacts while respecting rights

What was achieved and how is Aashukan influencing best practice IA when it impacts Indigenous Peoples? Mooting a bi-annual pre-conference gathering for Indigenous Peoples that advances the Aashukan Declaration.

Chairs: Philippe Hanna & Kepa Morgan

Social Impact Assessment (12A)

Social impact assessment

The SIA Section is a professional network of SIA practitioners and researchers. The Section provides a platform for international collaboration and information sharing. The goal is to keep those involved and interested in SIA up to date with the latest developments in theory and practice.

Chairs: Irge Satiroglu & Katherine Witt

Opening/Closing plenaries

Opening plenary

Opening address



Ntsako Baloyi
IAIA18 Co-chair



Sean O'Beirne
IAIA18 Co-chair

Welcome comments



Marla Orenstein
IAIA President

Greetings from the host



Cllr Zandile Gumed
Mayor, City of Durban

Greetings from the host



Dr. Bomo Edith Edna Molewa
Minister of Environmental Affairs

Presentation of the IAIA Global Award

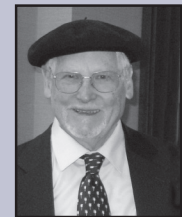
THE DANISH
INSTITUTE FOR
HUMAN RIGHTS

Miguel Coutinho
IAIA Awards Committee Chair

Charlie Wolf Memorial Lecture



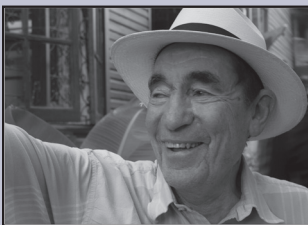
Charlotte McClain-Nhlapo
Global Disability Advisor for
the World Bank Group



**Charlie
Wolf**

The Charlie Wolf Memorial
Lecture introduces the unique
environmental, social, and cultural
features of the conference location.

Keynote address: "Do you have to be white to be green?"



The Honorable Albie Sachs

Albie Sachs is an activist and a former judge on the Constitutional Court of South Africa (1994 – 2009). He began practicing as an advocate at the Cape Bar at the age of 21, defending people charged under the racial statutes and security laws of apartheid. After being arrested and placed in solitary confinement for over five months, Sachs went into exile in England, where he completed a PhD from Sussex University. In 1988, he lost his right arm and his sight in one eye when a bomb was placed in his car in Maputo, Mozambique. After the bombing, he devoted himself to the preparations for a new democratic constitution for South Africa. When he returned home from exile, he served as a member of the Constitutional Committee and the National Executive of the African National Congress. He is the author of several books, including *The Jail Diary of Albie Sachs*, *Soft Vengeance of a Freedom Fighter*, *The Strange Alchemy of Life and Law*, and *We, the People: Insights of an activist judge*. His latest book is *Oliver Tambo's Dream*.

Sachs has travelled to many countries sharing his experiences in order to help heal divided societies.

Opening plenary sponsored by Department of Environmental Affairs

Closing plenary

IAIA18 summary report

Sean O'Beirne and Ntsako Baloyi, IAIA18 Co-chairs; Francois Retief, Technical Program Chair

Keynote address

"Environmental Justice and Its Discontents: A Time for Radical Change"

Melissa Fourie, Executive Director, Centre for Environmental Rights (CER) South Africa

Awards

Miguel Coutinho, Chair, Awards Committee • Marla Orenstein, IAIA President
Individual Award • Regional Award • Institutional Award • IAPA Best Paper of 2017

Presidential address

Sara Bice, IAIA President (incoming)

Invitation to IAIA19-Brisbane

Lachlan Wilkinson and IAIA19 Committee

Close of conference

Ntsako Baloyi and Sean O'Beirne, IAIA18 Co-chairs

Closing plenary sponsored by African Development Bank

Understanding stakeholder expectations in impact assessment

Thursday 17 May | 09:00-10:30 | Hall 2BH

World Café

Chair(s): Megan Jones, Angus Morrison-Saunders, Jenny Pope

Come join our World Café discussions on evolving stakeholder expectations of the IA process.

Take the opportunity to meet new people while having your say and hearing others' perspectives on the extent to which IA is expected to (and can) contribute to environmental justice for societies in transition.

Toward improved implementation of biodiversity offsets

Thursday 17 May | 09:00-10:30 | Hall 2A

Theme Forum

Chair(s): Dave Cox, Susie Brownlie

IAIA Section: Biodiversity and Ecology

Biodiversity offsetting (BO) addresses ongoing loss of biodiversity, but successful implementation is limited. This session will define the factors for this and then analyze the strengths of different offsetting systems in addressing implementation issues. The outcome will be essential success elements for BO systems to improve practice.

Challenges of offset implementation in Guinea

Campbell, Genevieve; Livingstone, Suzanne; Fontaine, Malcolm; Suter, Jamison; Fontaine, Rene; Rabenantoandro, Johny

Mineral licenses and high biodiversity areas overlap extensively in Guinea; however, no national mechanisms exist to facilitate offsetting. We present our lessons learned for offsetting in West Africa.

Achieving No Net Loss for migratory birds

Cauldwell, Andrew; Brownlie, Susie; Fernandez Bilbao, Amalia

An innovative offsetting framework was applied in Ghana to achieve No Net Loss for migratory shorebirds that incorporated a local community conservation programme to alleviate ongoing threats.

Guidelines for implementing biodiversity offsets

Namara, Justine; Buhanga, Edgar

Biodiversity offsets is important for compensating for residual impacts. However, developers don't know how to implement it. The guidelines will give guidance to developers on how it can best be done.

South African National Biodiversity Offsets Policy

Kershaw, Pamela

The first national biodiversity offsets policy being developed in South Africa and in the African continent.

Resilience in infrastructure planning and assessment

Thursday 17 May | 09:00-10:30 | 11

Roundtable

Chair(s): Michelle Audouin

Resilience thinking recognizes the inherently unpredictable nature of social-ecological systems. The South African Council for Scientific and Industrial Research is developing a guide on applying resilience principles in infrastructure planning and assessment as part of the international GRAID Programme. This draft guide will be presented, followed by a roundtable discussion.

Decision-making in an uncertain world: Welcome to the Anthropocene

Friday 18 May | 09:00-10:30 | Hall 2BH

Workshop

Chair(s): Nicholas King, Francois Retief, Peter Lukey

The Anthropocene is described as a new geological epoch, a transition into one in which the influence and impact of humanity is overwhelming all other geological signals. The fossil record of the Anthropocene is predicted to show a layer of manufactured, artificial materials and waste from urbanized and built environments; a layer of ubiquitous physical and chemical pollution; a rapid and massive loss of biological life from the planet, the so-called 6th extinction; and a very rapid change in global climate. These changes are and will increasingly transform our planet, our societies, our ways of life and—without unprecedented global political cooperation—are predicted to be catastrophic for much of humanity.

The Anthropocene is an era of which we have no experience and for which we are ill-equipped in terms of understanding trends and trajectories and long-term outcomes. This session will explore potential future scenarios and the new leadership and decision-making approaches required to deal with the challenges of the Anthropocene.

ELA theme forum: Legal perspectives on environmental (in)justice

Friday 18 May | 09:00-10:30 | 11

Panel Discussion

Chair(s): Anél du Plessis, Peter Kantor

Organized by the Environmental Law Association of South Africa (ELA), the session deliberates the meaning of environmental justice from a South African point of view in the light of the country's Constitution and framework environmental law. It illustrates the courts' application of the legal principles underpinning environmental justice in a number of forthcoming, decided, and/or ongoing cases.

Panelists

Anél du Plessis: Perspectives on the changing meaning of environmental injustice

Stewart Green: Local government, pollution, waste, and environmental injustices in court

Peter Kantor: Procedural environmental injustices in court

Wlilimien du Plessis (NWU): Environmental law, EIA, and environmental injustices in court

John Rantlo: *Ex post facto* authorizations and environmental injustices in court

International Finance: The role of independent accountability mechanisms

Friday 18 May | 09:00-10:30 | Hall 2A

Panel Discussion

Chair(s): Gina Barbieri

This session focuses on international development finance and access to independent accountability mechanisms as a means of achieving environmental and social justice.

Panelists

Erica Bach, Project Complaint Mechanism Officer, European Bank for Reconstruction and Development

Dilek Barlas, Executive Secretary, Inspection Panel, World Bank

Sonja Derkum, Head, Complaints Mechanism, European Investment Bank

Bill Kennedy, Director, Office of Accountability, US Overseas Private Investment Corporation (OPIC)

Victoria Marquez Mees, Director, MICI, Inter American Development Bank

Sekou Toure, Director, BCRM, African Development Bank

Concurrent sessions

ASSESSING AND MANAGING ENVIRONMENTAL RISKS IN SOCIETIES IN TRANSITION

Assessing the capacity to manage environmental and climate change risks

Wednesday 16 May | 15:00-16:30 | 21ABC

Workshop

Chair(s): John Carstensen, Nick Pyatt

This session describes CADD and how it can be used by impact assessors to identify and monitor changes in the risk and opportunity posed by organizational capacity to manage climate risk.

Adaptation capacity diagnosis and development

Pyatt, Nicholas; Black, Doogie

CaDD is a metric for developing organizational capacity to adapt to climate change. CaDD can be used by impact assessors to identify and monitor changes in the risk and opportunity posed by organizations or systems.

EIA effectiveness for infrastructure development projects in Africa (I)

Saturday 19 May | 11:00-12:30 | Hall 2A

Paper Session

Chair(s): Catherine Warburton

Case studies from across the African continent are presented to evaluate impact assessment practices in renewable energy, transboundary pipeline, railway, dam, tourism, and other infrastructure development projects in inter alia Zambia, South Africa, Uganda, Tanzania, Mozambique, and Nigeria. Shortcomings are identified and recommendations proposed for more effective IA practice.

The EIA uprising in Africa

Liversage, Nicola

Case studies from Africa where a mindshift towards EIAs in infrastructure projects can revolutionize their value.

Impacts of transborder projects: A case of EACOP

Ogwang, Tom; Vanclay, Frank; van den Assem, Arjan van den Assem

We propose that the potential socio-economic and environmental impacts of the EACOP project be avoided, minimized, or mitigated. There should be an inclusive, open decision making and conflict resolution process.

Reconciling theory with practice in EIA reviews

Ojile, Meshach

The study takes a critical look at the Nigerian EIA system respective to reviews of EIA Reports with a view to comparing with international best practice for EA effectiveness.

IA by the community in transition

Raissyian, Behzad

A local community has been trained and coached to use IA for their tourism initiative, to test how effectively IA can be used by the community itself where there are no resources to hire a consultant.

EIA effectiveness for infrastructure development projects in Africa (II)

Saturday 19 May | 14:30-16:00 | Hall 2A

Paper Session

Chair(s): Catherine Warburton

Case studies from across the African continent are presented to evaluate impact assessment practices in renewable energy, transboundary pipeline, railway, dam, tourism, and other infrastructure development projects in inter alia Zambia, South Africa, Uganda, Tanzania, Mozambique, and Nigeria. Shortcomings are identified and recommendations proposed for more effective IA practice.

Nacala Dam: Retrospective look at the ESIA

van Rooyen, Magnus

An evaluation of the practical accuracy of the impact assessment for the Nacala Dam rehabilitation project in northern Mozambique.

Making irrigation biodiversity-friendly in Malawi

Ledec, George

Malawi's Shire Valley Transformation Program features biodiversity-friendly irrigation development, including a fish barrier on the Main Canal to help protect Lake Malawi from invasive species.

Environmental and Social

Safeguards Lesson: Zambia

Kaniki, Christopher; Sakala Kayope, Stella

Safeguards are a real sustainable tool!

Evaluating EIA for infrastructure projects

Warburton, Catherine

Key elements of SA EIA requirements will be analyzed through the Gautrain EIA as a case study. Process-related flaws and deficiencies and alternative approaches will be discussed.

Environmental justice and the pursuit of sustainable cities

Friday 18 May | 14:30-16:00 | 12A

Paper Session

Chair(s): Anél Du Plessis

This session is devoted to new knowledge on good urban governance from the perspective of environmental, planning, and local government law, policy, and practice. The session focuses on the nexus between good urban governance and enhanced environmental justice in cities and other localities in the global North and South.

Transition to sufficiency and urban resilience

Shippey, Karen; van Staden, Francini

Drawing from harsh socio-ecological realities and crises, this paper frames the need for fundamental decision making shifts, from authorities to communities toward sufficiency and urban resilience.

Cornubia—Transitioning society—Planning

Bassa, Humayrah; Reddy, Prashika; Hoffman, Bjorn

The role and evolution of environmental planning in the creation of integrated human settlements.

Cornubia—Transitioning society—Implementation

Hoffmann, Bjorn; Reddy, Prashika; Bassa, Humayrah

The success and challenges of investing in both contractors and surrounding communities during project implementation—Cornubia: A transitioning society.

Environmental management for suburban areas

Yi, Young-Jae

This study developed a methodology for identifying potential areas of disorderly development in suburban areas, focusing on residential and industrial area mix.

Social impacts of transport in sustainable cities

Mottee, Lara; Vanclay, Frank; Arts, Jos

Managing the social impacts of transport requires their consideration in urban governance and planning. This paper argues for good practice EIA, SIA, and follow-up in transport for sustainable cities.

Reconfiguration of the role of cities in the global pursuit of socially-just and climate-resilient communities

du Plessis, Anél

This paper is set against the background of the recent adoption of Sustainable Development Goal 11 with its focus on safe, sustainable, resilient and inclusive cities and the United Nations' New Urban Agenda released in 2016.

Improving environmental and social performance on construction projects (I)

Thursday 17 May | 11:00-12:30 | 22ABC

Paper Session

Chair(s): Patrick Francis

Ultimately, the value of environmental and social measures lies in their implementation. This session explores strategies to improve their performance in construction projects. These include easier-to-implement plans, cloud-based tools to update and use information in the field in real time, and contractual incentives for good performance.

From assessment to practice: Tools for transition

Skotareva, Olga

Let's talk about management and contractual mechanisms that are instrumental to successful implementation of environmental and social measures during construction.

Geospatially-enabled project management

Park, Douglas

Geospatially enabled project management is a new approach that allows for enhanced and better informed decision making on large construction projects.

Environmental risk management in a dynamic environment

Gordhan, Bharat; Hayes, Johan

How does one manage environmental risks within a dynamic environment, post-environmental authorization, and without the EIA tool? Perhaps the environmental jargon could be useful to the engineer.

Defining roles in construction EMPs

Wessels, Jan-Albert; Rossouw, Nigel; Swanepoel, Robin

This paper defines the roles and relationships between different environmental actors and their contribution to the implementation of construction environmental management plans (EMPs) in South Africa.

Better environmental/social results for infrastructure

Francis, Patrick; Mason, Douglas

This presentation highlights practical and effective design, implementation, and oversight measures to translate environmental and social assessments into improved results on construction projects.

Improving environmental and social performance on construction projects (II)

Thursday 17 May | 14:30-16:00 | 22ABC

Paper Session

Chair(s): Patrick Francis

Ultimately, the value of environmental and social measures lies in their implementation. This session explores strategies to improve their performance in construction projects. These include easier-to-implement plans, cloud-based tools to update and use information in the field in real time, and contractual incentives for good performance.

Rehabilitation risk and project closure efficiency

Gosney, Gwen

Improved integration of environmental, engineering, and project management deliverables is identified as a critical means of reducing rehabilitation risk and improving project closure efficiency.

Social management in water infrastructure projects

Shale, Thato

Trans Caledon Tunnel Authority (TCTA) manages projects' social aspects through effective stakeholder management and local communities' participation, in order to maximize project benefits and minimize negative impacts.

Who protects the protectors?

Gouws, Pierre; Streater, Tom

Exploratory discussion of safeguarding security guards' human and labour rights on internationally-financed projects, often of insufficient focus during assessment, due diligence, and monitoring.

Biodiversity-rich connection of two continents

Arisoy, Defne

TANAP, a mega pipeline project, connects two continents without sacrificing biodiversity and enhances an in-country ecological database with its baseline studies, action plan, and offset strategy.

Infrastructure financing and EIA: Managing risk and the public interest

Wednesday 16 May | 15:00-16:30 | 21G

Panel Discussion

Chair(s): Patience Whitten

This panel will discuss MDB and other publicly-sponsored infrastructure development and how the finance process involved potentially influences the quality of EIAs. Panelists will discuss the mechanisms in place to develop better-quality EIAs so that shareholders and others can more confidently support the environmental integrity of these projects.

Two case studies from USAID's MDB project review

Bullen, Victor; Erwin, Alexis; Johnston, Leslie

USAID's independent field review mechanism of multilateral development banks (MDB) projects will present two case studies, one on Zambia roads and another on Solomon Islands hydro, as they relate to environmental and social concerns.

Infrastructure public procurement in Sweden

Longueville, Anna

Decision-making in infrastructure public procurement projects in Sweden.

SEA as a tool for radical reform

Thursday 17 May | 11:00-12:30 | Hall 2A

Paper Session

Chair(s): David Annandale

Proponents of SEA hope that the approach will lead to better design of public policies, plans, and programs. In addition, it has the potential to be a tool for radical reform in countries in transition, where freedom of expression is not always guaranteed.

Environmental assessment of the Guyana-Brazil LTP

Coutinho, Miguel; Bynoe, Mark; Monter, Sara; Borrego, Carlos; Monter, Ernesto

The tiering approach developed to identify environmental and social issues and impacts of undertaking the land transport project (LTP) linking northern Brazil with a port in Guyana.

The challenges of promoting SEA in Bhutan

Dalal-Clayton, Barry

How Bhutan is addressing the challenges of promoting SEA and present lessons from testing Bhutan's new SEA Guidelines during an SEA of the road sector master plan.

Changing role of SEA in a transitioning country

Kalle, Heikki; Faith-Ell, Charlotta; Arts, Jos

SEA can function as a tool promoting transition to an open society, e.g. in Estonia, where SEA has served as a change agent from top-down planning system into communicative planning.

How does SEA lead to radical reform?

Annandale, David

How does SEA result in radical shifts in policy reform?

SEA practice for regional and land use planning: Examples from Africa and Asia

Friday 18 May | 14:30-16:00 | Hall 2BH

Paper Session

Chair(s): Gwen van Boven

This session will provide the opportunity for people and organizations to share their experiences with SEA for regional and land use planning at sub-national level in low and middle income countries, focusing on plans in rural regions.

SEA and IWRM for river catchment planning in Rwanda

Hardon, Anne; Slootweg, Roel; van Boven, Gwen

River catchment planning in Rwanda is developed through learning-by-doing with external coaching. The approach integrates principles and procedures of SEA and integrated water resources management.

SEA for the Ayeyarwaddy River delta in Myanmar

Kolhoff, Arend

An SEA for the Ayeyarwaddy River delta in Myanmar was recently carried out and completely integrated in the planning process. Question answered: What is the added value of an integrated SEA?

CSO engagement in SEA: Lessons from Indonesia

Puspitasari, Astrid; Harizajudin, Riza

Civil society engagement in the SEA process is needed to encourage more participatory and better quality SEA outcomes. We share experiences with SEA for district planning in Indonesia.

National SEA for aquaculture development in SA

Kellerman, Lizande; Snyman-Van der Walt, Luanita;

Lochner, Karabo; Morant, Patrick; Lochner, Paul

National strategic environmental assessment for freshwater and marine aquaculture in South Africa to create an enabling environment where responsible and sustainable aquaculture can be developed.

SEA and land use planning for wetlands in Kenya

Nelson, Peter

This paper compares, contrasts, and draws lessons from the findings from the SEAs and land use plans for two of Kenya's five internationally important delta wetlands.

UN Environmental and Social Sustainability (ESS) Framework: Enabling SDGs

Thursday 17 May | 11:00-12:30 | 12D

Chair(s): Yunae Yi

Is the achievement of the SDGs through environmental and social sustainability approach straightforward and commonsensical? This session will share the UN efforts on it.

Sustainability in operations and beyond in UNOPS

Costa, Nives

UNOPS social and environmental management system has delivered clear improvements at the level of facilities and operations (and beyond), demonstrating a concrete support for the Sustainable Development Goals (SDGs).

Environmental and Social

Safeguards in UN programs

Mwanundu, Sheila; Mergler, Holly

Moving toward a common approach to safeguards in the UN: A comparative analysis of UN agencies' respective environmental and social standards to reach a collective framework of minimum requirements.

Adjusting the UN ESS framework to the policy level

Partidário, Maria; Yi, Yunae

Presenting and discussing a model to extend the UN environmental and social framework (ESS) to the policy/strategy level following a rationale appropriate to complex, non-linear systems and situations.

Concurrent sessions

Whose canary in whose coal mine? A Hypothetical

Friday 18 May | 11:00-12:30 | Hall 2BH

Debate/Practitioner exchange

Chair(s): Tanya Burdett, Jack Krohn

If development comes at a cost, who pays? Join Canaria's citizens' jury to assess environmental indicators that might tell different stories to different stakeholders. How much stress can the canary in the coal mine sustain? Come and participate in a Hypothetical with a twist—and a role for everyone.

Panelists

Martine Lehman, RHDHV. Role: Proponent, New Canaria Mining Co-operative

Philippe Hanna, RHDHV. Role: Traditional owner

Gerard Van Weele, RHDHV. Role: Government

Candan Ergeneman, Ramboll Environment & Health. Role: Hydropower Company Representative

Lerato Ratsoenyane, IAP2 South Africa

Thato Shale, IAP2 South Africa

CONTRIBUTION OF IA TO HUMAN WELLBEING

Great Scott! New thinking in IA

Thursday 17 May | 16:30-18:00 | 12A

Paper Session

Chair(s): Reece Alberts, Francois Retief

This session delves into new thinking around IA communication, adaptation and information. The papers ask important questions about improving IA practice into the future.

Making sense of it all: Big data, better decisions

Scott-Brown, Miles; Taylor, Tim

Even bigger than our footprint in the Anthropocene is the amount of data associated with it. How can we use this knowledge to make better decisions towards a more sustainable future?

Custom bikes, houses, and Nikes: What can EA learn?

Alberts, Reece; Retief, Francois; Roos, Claudine

Can the application of design theory, thinking, and design elements help simplify EA? digital

Adaptive management and sanctioning in Chile

Araya, Gino; Perez, Cristian

Adaptive environmental assessment is a tool that should be incorporated as a measure to improve the environmental performance of investment companies.

Using visual language in communicating EA processes

Sanderson, Danielle

Communicating sustainable development and environmental resilience to those outside this specialist realm requires branching out of purely scientific explanation and into that of graphics and media.

Impact assessment, decision making, and change

Thursday 17 May | 14:30-16:00 | Hall 2BH

Workshop

Chair(s): Wil Thissen, Lone Kornøv

This session explores insights from neighboring fields that have much to offer for the theory and practice of impact assessment (such as decision making, learning, policy sciences, organizational change, transitions, etc.) and why, despite calls to spend more attention on such fields, not much has changed in the literature on IA for over 20 years. Invited leading scholars will give brief pitches on their fields of interest and expertise, and more generally share their thinking on the topic.

Improved integration of land acquisition and resettlement expertise in ESIA

Thursday 17 May | 11:00-12:30 | 22G

Panel Discussion

Chair(s): Eddie Smyth, Frank Vanclay, Ellen De Keyser

This session will explore the central role played by impact assessment consultants in assessing the impact of land acquisition and resettlement (LAR) on vulnerable communities in societies in transition. The session format will be mixed with a selection of papers and a panel of LAR experts discussing how LAR policy and practice can be improved.

Managing RAP expectations and timelines

Hart, Andrew

How the disconnect between a mine's unrelenting schedule and budget and a carefully managed and implemented resettlement process can undermine a resettlement process and social license.

Political economy of African extractive investment

Pedersen, Rasmus; Jacob, Thabit

This paper demonstrates how relations between the state, investors, and communities in African extractives are currently changing, using Tanzania as a case. These changes also affect impact assessments.

Land acquisition, land tenure, and gender

Wellmann, Gwendolyn

This paper examines the intersection between gender and land tenure, providing insights on the disadvantages women face when the land on which they live is acquired for development projects.

Land administration systems and vulnerability

da Cunha, Maria; Dava, Eden

The paper will draw from examples in Africa and Latin America to illustrate how land acquisition and resettlement (LAR) experts can use policy to assess LAR risks and potential impacts, and recommend policy and regulatory solutions.

International progress in regional-scale impact assessment

Thursday 17 May | 11:00-12:30 | 21G

Paper Session

Chair(s): Terry Calmeyer

Regional impact assessment is increasingly popular among project proponents, governments, NGOs, and societies that wish to better address cumulative environmental effects and issues of environmental and social justice. This session profiles a range of

international experiences in regional impact assessment, and the methodologies, tools, partnerships, and public engagement strategies used to support it.

Brazilian hydropower plants: Good practices of CEA

Gallardo, Amarilis; Silva, João Carlos; Gaudereto, Guilherme; Sozinho, Davi

This work aims to analyze how the evaluation of cumulative impacts has been carried out in a Brazilian hydroelectric planning in comparison to the best practices of cumulative effects assessment (CEA) for a watershed.

Regional water strategy for Canterbury

Jenkins, Bryan

A regional water management strategy was developed in Canterbury to address the cumulative effects of water resource abstraction and land use intensification through irrigation.

Landscape level assessment, central Namib Desert

Lyons, Anna; Howard, Pippa

Sharing an approach to landscape level assessment of biodiversity vulnerability and land use in the Central Namib.

Psycho-social impact in support of environmental justice

Friday 18 May | 16:30-18:00 | 12A

Paper Session

Chair(s): Michael Edelstein

Psycho-social impact assessment (P-SIA) has particular utility for identifying in detail adverse impacts that constitute the harm or injustice suffered by people due to environmental change and is important for avoiding harm as well as mitigating it and/or charting recovery. Papers discuss theory, method, applications, and cases of P-SIA.

Reducing psycho-social stress in resource towns

Rifkin, Will; Witt, Katherine; Grant, Sharon

Community, government, industry, and researchers agree that psycho-social stress is the greatest immediate health effect of resource development in Queensland's rural gasfield communities.

Lessons learned from a forced relocation project

Hussain, Thilmeeza

The 2004 Indian Ocean tsunami made residents of Kandholudhoo refugees in their own country. This paper details the impacts of 4 years of temporary housing and subsequent relocation to a nearby uninhabited island.

Tension, conflict, love, and respect

Sanda, Ahmed

The paper will simply discuss the value we place on the environment from the perspective an individual's understanding, perception, experiences, and education may trigger conflict.

Uncertainty or manipulation? Post-factual IA

Fischer, Thomas; Sykes, Olivier; Clement, Sarah

Is it uncertainty which is emerging as the biggest problem of IA in the era of the Anthropocene that we are now entering, or is it rather the manipulation of IA processes through powerful interests?

Quality and effectiveness of impact assessments

Thursday 17 May | 16:30-18:00 | Hall 2BH

Paper Session

Chair(s): Wil Thissen

Quality and effectiveness of impact assessments can be defined and assessed in different ways, as illustrated by the literature. This session explores ways to advance quality and quality assessments, and will add empirical studies on and lessons about effectiveness from different countries.

How can we improve professional judgment?

Brown, Glenn

Professional judgment in IA often requires more than technical knowledge. Tools that assist problem analysis, reasoning, and decision making can improve professional judgment.

Toward the systematic use of quality review packs

Montaño, Marcelo; Veronez, Fernanda

The paper describes a strategy to the systematic use of Lee and Colley Quality Review Package driven by the relative importance between its sub-categories, categories, and areas of evaluation.

Perception and discourse analysis of EIA practice

Montaño, Marcelo; Veronez, Fernanda

The paper is based on discourse analysis and reveals the perception of EIA analysts regarding the practice of EIA.

Exploring the concept of effectiveness in SEA decision-making

Faith-Ell, Charlotta

The aim of the paper is to contribute to the understanding of the concept of effectiveness in SEA in decision making.

Reforming IA law in Canada: Moving to the next generation? (I)

Friday 18 May | 11:00-12:30 | 22DEF

Panel Discussion

Chair(s): John Sinclair, Meinhard Doelle

This series of sessions is comprised of an overview of the proposed Canadian IA process and short panel presentations about key IA issues to encourage open sharing of ideas and analyses regarding the reforms contained in the proposed lay and an initial evaluation of progress made on next generation IA.

Canada's renewed approach to impact assessment

Loth-Bown, Christine

The presentation discusses the review of Canada's environmental assessment process and the proposed path forward, including engagement of Indigenous Peoples.

Panelists

Alan Diduck
Bill Ross
Meinhard Doelle
John Sinclair

Reforming IA law in Canada: Moving to the next generation? (II)

Friday 18 May | 14:30-16:00 | 22DEF

Panel Discussion

Chair(s): John Sinclair, Meinhard Doelle

This series of sessions is comprised of an overview of the proposed Canadian IA process and short panel presentations about key IA issues to encourage open sharing of ideas and analyses regarding the reforms contained in the proposed lay and an initial evaluation of progress made on next generation IA.

Integrating climate change into EA

Doelle, Meinhard

Federal jurisdiction over climate in IA in Canada

Johnston, Anna

What is the federal government's power to assess climate implications and seek to achieve climate mitigation in accordance with the Paris Agreement in project, regional, and strategic IA in Canada?

Australian perspectives on sustainability in IA

Pope, Jenny

The IA reform process in Canada is an opportunity to embed a sustainability approach to impact assessment. We contribute a perspective from Australian experiences with sustainability assessment.

Improving project-based CEA in Canada for biodiversity

Sanchez, Luis; Dibo, Ana Paula; Noble, Bram

A survey with Canadian EA practitioners was conducted to gauge their perspectives about specific options or drivers of changes for improving the practice of project-based cumulative effects assessment (CEA) for biodiversity.

Legislating deliberative public involvement in IA

Diduck, Alan P.; Sinclair, A. John

This paper considers suggestions for legislating deliberative public involvement in impact assessment, and in particular in relation to proposed reforms to the Canadian Environment Assessment Act.

Reforming IA law in Canada: Moving to the next generation? (III)

Friday 18 May | 16:30-18:00 | 22DEF

Panel Discussion

Chair(s): John Sinclair, Meinhard Doelle

This series of sessions is comprised of an overview of the proposed Canadian IA process and short panel presentations about key IA issues to encourage open sharing of ideas and analyses regarding the reforms contained in the proposed lay and an initial evaluation of progress made on next generation IA.

Follow up and monitoring in Canada: The next generation

Ross, Bill

This paper will consider evolving federal IA reforms in Canada by comparing plans with two sets of principles: those espoused by Canada and those traditional principles of follow up.

Reforming SEA in Canada: Lessons from Kenya

Spaling, Harry; Sinclair, A. John

This paper explores how regulatory frameworks, guidelines, and practice in Kenyan SEA may apprise SEA reform in Canada.

Canadian EA reform: Integrating GBA+

Walker, Heidi

This paper examines what a requirement for gender-based analysis plus (GBA+) might mean for EA practice and reviews potential opportunities and challenges for its application.

Canadian reforms for IA jurisdictional cooperation

Sinclair, A. John

This paper considers the reforms proposed in the new Canadian Federal IA Bill for "co-operative assessment" and whether the reforms adopted ensure processes harmonize upward to the highest standard.

SEA's role in transitions to sustainability, endorsing SDGs

Friday 18 May | 11:00-12:30 | 22G

Workshop

Chair(s): Maria Partidário

How can SEA be instrumental in leading sustainable development processes? Debates in IAIA17 recognized that SEA could play a role in helping to achieve SDGs. This opens up opportunities to look at SEA as an instrument of strategic change. This session invites examples on how SEA can strategically promote SDGs.

A polyphonic concept of environmental justice

Lopez, Luis

This paper seeks to incorporate the intercultural dimension from the Shipibo-Konibo perspective into the environmental justice discussion within the framework of IA and Sustainable Development Goals.

SEA participation and solid waste management: Kenya

Spaling, Harry; Dennis, Patricia N.; Sinclair, A. John

This paper explores how public participation in SEA is applied to two urban planning cases with solid waste management components in Kenya.

Who's asking? Climate vulnerability in Gauteng

van Weele, Gerard; Euler-Van Hulst, Karolina; Louber, Janet

An outcomes-based approach to determining climate change vulnerabilities in the Gauteng City Region (South Africa).

Concurrent sessions

ECOSYSTEM SERVICES, HEALTH, LIVELIHOODS, AND ENVIRONMENTAL JUSTICE

Applying resilience thinking in impact assessment

Saturday 19 May | 11:00-12:30 PM | 21G

Paper Session

Chair(s): Cary Ehrman, Pieter Booth

This session will provide the opportunity for people and organizations to share experience in integrating resilience assessment in the impact assessment process. Papers cover frameworks and tools describing case studies representing a wide variety of contexts, key attributes, and lessons learned.

Limiting ecological impacts of sand extraction

Kominek, Byron; Bernhard, Teresa; Habib, Josh; Hall, Patrick

Limiting ecological impact of sand extraction in school construction projects in Malawi.

Criteria for defining natural wetlands

Venter, Marius; Esterhuysen, Surina

The key question that this study aims to address how to define natural and man-made wetlands by looking at legal, ecological, and philosophical criteria.

ESA in climate adaptation

Boltemo Edholm, Jenny

Ecosystem service assessments in climate adaptation, implemented adaptation, methods used and benefits from the methods used.

Ecosystem services and oil/gas activities

Ojile, Meshach

This study reports on how oil and gas pipelines and industrial activities have caused blockage in an area and an attempt by the local population to claim some compensation for ecosystem resource losses.

Use of habitat equivalency analysis

Booth, Pieter; Singer, Eugenio; Wenning, Romulo; Gomes, Fabiana; Wenning, Richard

The use of habitat equivalency analysis (HEA) to support ecosystem restoration as part of a resilience model for Rio Dôce Basin after the Fundão Dam failure.

Resilience model for the Rio Doce Basin, Brazil

Ehrman, Cary; Singer, Eugenio; Wenning, Hugo; de Oliveira Camargo, Ricardo; Wenning, Richard

The development and application of the resilience model prepared to support the restoration of the Rio Dôce Basin after the Fundão Dam failure.

Community participation in governance processes for reduced vulnerability

Friday 18 May | 14:30-16:00 | 21DEF

Workshop

Chair(s): Sean O'Donoghue, Catherine Sutherland, Kathleen Diga

Community participation in catchment management governance processes has resulted in a number of approaches employed to improve water security and reduce vulnerability in Durban. This session aims to highlight how these projects address social and environmental injustice.

Poverty reduction and environmental policy governance

Diga, Kathleen; Bracking, Sarah

Environmental governance starts with cities taking stock of their climate change contribution. This paper provides insight into Durban's monitoring of its evolving climate-related project portfolio in relation to poverty reduction.

Environmental justice driven by social change

Dithale, Ntswaki; Mahood, Kirsten

Wise Ways Water Care is an initiative with a unique approach in mitigating socio-ecological challenges to improve ecosystem functions while supporting sustainable livelihoods of poor communities.

ENERGY AND SOCIETIES IN TRANSITION

Country experiences with environmental justice in practice: Oil and gas

Wednesday 16 May | 15:00-16:30 | Hall 2A

Paper Session

Chair(s): Frank Eklo

This is an Oil for Development program session

The oil and gas industry does have a positive economic impact for most countries, but regrettably also negative impacts. Negative environmental impacts affecting local communities livelihood are more often than not being overlooked. This session will hear experiences and cases where environmental justice has been sought.

Environmental justice in the Niger Delta Region

Alonge, John; Chinweze, Chizoba

Oil exploration in the Niger Delta has left trails of impact which the government of the day is determined to clean-up, especially in Ogoniland, and right the wrongs of the past.

ESIA process and the application of local content

Leche, Juliet

It is essential for local content to be an integral part of the ESIA process by identifying risks and opportunities early enough in the process. Many African nations are yet to have policies.

Distilling the Nigerian government's attitude to compensation

Olorundami, Fayokemi; Olorundami, Tokunbo

Compensating for environmental injustice is very important in securing environmental justice. Is Nigeria committed to compensating for past wrongs?

IA best practice in mining: Lessons learned

Wednesday 16 May | 15:00-16:30 | 12D

Paper Session

Chair(s): Carli Steenkamp

Best practice mining cases from around the world are presented that show how different impact assessment tools, approaches, and methods can be used to address impacts related to environmental justice.

Forest smart mining: Sharing best practice

Lyons, Anna; Howard, Pippa

Sharing the results of a recent World Bank study identifying good and bad practices of large-scale mining in forest landscapes in relation to environmental justice.

MNOCs CD wellbeing efforts in oil-rich Niger Delta

Bristol-Alagbariya, Edward

Multinational oil companies (MNOCs) in Niger Delta are embarking on community development programs in their host communities, which require commitment of the MNOCs, government, and the communities.

SEA of the artisanal mining sector in Sierra Leone

Koroma, Ranita

This SEA, conducted in 2016, represents an in-depth study of legislative, environmental, economic, and social issues relating to artisanal mining and environmental justice in Sierra Leone.

Santos Basin pre-salt cumulative impact assessment

Bettencourt, Pedro; Nader, Tatiana; Fulgencio, Cláudia;

Canas, Ângela; Scarton, Marcel; Poletto, Carolina

Referring to a large cumulative impact assessment in São Paulo and Rio de Janeiro Brazilian States, the paper presents methodologies and arising social justice and sustainable development issues.

Integrated environmental assessment offshore

Almeida, Eliane Silva Ferreira; Penido, Fabricio

The integrated environmental assessment methodology proposed in this work was elaborated based on the analysis of the environmental impacts arising from the environmental impact assessment of pre-salt integrated projects.

Integrated IA for addressing Africa-specific challenges in extractives

Saturday 19 May | 14:30-16:00 | 22ABC

Panel Discussion

Chair(s): Rebecca DeWinter-Schmitt

IAIA Section: CSR

This interactive panel will focus on impact assessment to address challenges associated with resource extraction in Africa. Presenters will share examples demonstrating the value of integrated impact assessment to identify and manage the human rights, social, and environmental effects of extractive projects and to empower affected rights holders.

How to integrate human rights into the ESHIA process

Snashall, David

Integrating human rights impact assessment (HRIA) and environmental, social, and health impact assessment (ESHIA) is a challenge due to differing purposes, legal basis and viewpoints. This paper draws on a range of case studies to propose a process.

Value and pitfalls of integrated impact assessment

Winkler, Mirko

Against the evidence presented in two cross-sectional surveys that studied the effectiveness of the Addax Bioenergy project ESHIA (environmental, social, and health impact assessment), this paper discusses values and pitfalls of integrated IA.

Integrating human rights into IA: MENA and SSA

Salcito, Kendyl

Human rights intersect with environmental, social, and health conditions in complex, iterative ways. Case studies demonstrate the importance of non-linear analysis of corporate human impacts.

Using the concept of risk for transdisciplinarity

Schreiner, Greg

Complex social questions require integrated assessments which sometimes cross multiple, scientific, and knowledge disciplines. Here's a case study of how we attempted this, using the concept of risk.

Capacity building as a precursor to HRIA

Loots, Josua

Takeaways from human rights capacity building in preparation for human rights impact assessment in the mining sector.

Effective implementation: Where can we improve?

Walmsley, Bryony

How can we more effectively present the "business case" to developers for improved environmental and social management on their projects?

Is the oil and gas industry ready to prioritize environmental justice?

Thursday 17 May | 14:30-16:00 | 21G

Paper Session

Chair(s): Peter Tarr, Bryony Walmsley

This is an Oil for Development program session

Societies in transition are often suffering environmental injustice because of their weakened situation, socially and economically. The oil and gas industry in developing countries is often located in poor and environmentally-fragile regions dominated by societies in transition. This session will hear cases illuminating conflicts and opportunity.

Emerging social and environmental risks of oil

Mkutu, Kennedy

This work uses the case of Turkana, Kenya, to examine some of the emerging social and environmental risks of oil and how they might be averted.

TANAP "Silk Road of Pipelines" serving justice

Erdem, Fatih

TANAP (Trans-Anatolian Natural Gas Pipeline Project), "Silk Road of Pipelines," serving environmental and social justice.

Barriers to mitigating the indirect impacts of oil and gas

Holland, Twyla; Howard, Pippa

An integrated assessment of ecosystem services in northern Mozambique, and barriers to the effective mitigation of indirect project impacts in a rapidly changing landscape with multiple players.

The oil and gas industry and environmental justice in practice

Friday 18 May | 16:30-18:00 | Hall 28H

Workshop

Chair(s): Morgan Hauptfleisch, Bryony Walmsley

This is an Oil for Development program session

Environmental and social justice is often overlooked by the oil and gas industry, but may have dire consequences, something an increasing number of major oil companies have come to realize. Oil for Development participants will demonstrate interactions between oil and gas developments and environmental and social justice.

Managing ESG risks in hydropower in Africa

van den Berg, Stephan; Bungartz, Lindsey; Heather-

Clark, Alan; Ferreira, Rodrigo; Heather-Clark, Stuart

"De-risking" hydropower projects, located in pristine African environments and within declared protected areas, are explored from an environmental and social perspective to achieve bankability.

Tiering of SEA/EIA in relation to energy infrastructure plans

Friday 18 May | 16:30-16:00 | 12D

Paper Session

Chair(s): Luis Martins Dias, Maarten Scheffers, Jos Arts

The energy transition calls for new infrastructure and space for renewable energy projects. Different approaches (top-down, bottom-up) are possible for the realization of this transition. Experiences and tiering of impact assessment are discussed in this session, focusing on national/regional differences, decision-making, and public participation.

Governance by IA in the Brazilian hydropower sector

Gallardo, Amarilis; Gaudereto, Guilherme

This work aims to analyze the contribution of 3 types of IA instruments—EIA, SEA, and integrated environmental assessment—to promote the environmental governance of the Brazilian hydropower sector.

SEA to mitigate wildlife impacts from wind power

Skolnik, Benjamin; Magor, James

Strategic assessment of wildlife impacts from wind power development in Kenya will increase energy sector actors' understanding and ability to avoid impacts or plan mitigation of potential impacts.

German grid development: Effects on SEA/EIA

Geißler, Gesa; Rehhausen, Anke

We present the characteristics of the German transmission grid planning and permitting scheme and derive hypotheses on its effects on EIA and SEA with a special focus on tiering.

ENVIRONMENTAL JUSTICE CHALLENGES OF CLIMATE CHANGE

Energy justice: Beyond climate and environmental justice

Thursday 17 May | 16:30-16:00 | 21ABC

Paper Session

Chair(s): Darren McCauley, Jiska De Groot

This session explores the inter-linkages between energy, climate, and environmental justice. The major premise of the session is to explore how 'energy justice' contributes to the justice debate and action in terms of meeting societies energy, environmental, and climate targets.

The rise of the wind farms in Mexico

Escalante, Ariana

The fast approval of renewable energy has brought some issues due to its rapid implementation without consulting the communities that will be affected.

A socially just energy transition in Berlin?

Amoruso, Gloria

PhD research project on whether a socially-just energy transition in a city of inequalities is feasible. Local cases from the building sector in Berlin.

Concurrent sessions

Citizenship dimensions of energy justice

Damgaard, Caroline

How can we link principles of energy justice with understandings of individual consumers, or citizens, and their place in the energy system and transition?

Energy justice through a solar lens

Todd, Iain

The understanding of energy justice can be furthered by studying the potential and impact of solar energy across the globe. The implications argue for optimism.

HUMAN RIGHTS, EQUALITY, AND ENVIRONMENTAL JUSTICE

A rights-based approach to FPIC and HRIAs: Lessons from the field

Wednesday 16 May | 15:00-16:30 | 21DEF

Workshop

Chair(s): *Sara Bice*

This session will take a deeper look at community's role, voice, and agency in the face of mining, oil, and gas exploration projects. We discuss experiences from South Africa to Chile implementing tools to inform advocacy on free, prior, and informed consent (FPIC) and community-based approaches to human rights impact assessments (HRIAs). Expert practitioners will present case studies followed by an interactive session with audience participants.

Community-based HRIAs

Tamir, Irit (Oxfam)

A gold mine case study in Chile where indigenous communities were not granted proper consultation by the government of relevant companies. They chose a community-based approach to provide evidence of impacts from their perspective and recommendations for remedy.

FPIC tool for community advocacy

Wicomb, Wilimein (Legal Resources Centre)

Recent research that informs communities on their rights and relevant policies that can support their decision making and help mitigate negative impacts of extractive projects on the natural resources and livelihoods of communities in South Africa.

Regional approach to FPIC

Gwemende, Titus (Oxfam)

Oxfam's FPIC work with local communities impacted by the extractives sector at the Southern Africa regional level, drawing on experiences from Mozambique specifically.

Building local capacity for meaningful stakeholder engagement

Friday 18 May | 11:00-12:30 | 21DEF

Panel Discussion

Chair(s): *Kendyl Salcito*

IAIA Section: *CSRM*

This interactive panel discussion draws from the global expertise of practitioners using novel tools to meaningfully engage marginalized, vulnerable and unsophisticated stakeholders in impact assessment practice. Presenters will use firsthand experience to explore challenges and opportunities, with an eye to how fully informed stakeholders improve the effectiveness of assessment.

Rights-based approaches in company-led HRIAs

Gilles, Isabelle; Lipsett, Lloyd

This presentation seeks to provide practical reflections on the opportunities and obstacles for implementing rights-based approaches to engagement in company-led assessments.

Can we get to meaningful participation in ESIA?

Joyce, Susan

This will be part of an interactive panel and is intended to lay out case examples and to provoke questions about the challenges to meaningful participation within existing ESIA frameworks.

Full project cycle SIA: Optimizing social outcomes

Hart, Timothy

This paper describes work in progress to develop and implement an integrated full-project-cycle SIA approach to optimizing the outcomes of social projects and investments in mining communities.

Women and illegal mining in Africa

du Plessis, Willemien; Chamberlain, Lisa

This paper explores alternative instruments that could be used to formalize illegal mining for women in Africa.

Multi-disciplinary HRIA teams

DeWinter-Schmitt, Rebecca

Insights on the importance of multi-disciplinary teams for human rights impact assessment (HRIA) practice and learning from other disciplines to broaden assessment teams' skillsets and perspectives.

ECOWAS gender assessments in energy projects

Factor, Gabriela; Maduekwe, Monica

ECOWAS adopted a Directive on Gender Assessments in Energy Projects to ensure that vulnerable and marginalized persons are included and benefits result from energy infrastructure development.

Equality in IA and involuntary resettlement

Saturday 19 May | 11:00-12:30 | Hall 2BH

Paper Session/Pecha Kucha

Chair(s): *Michele Gilbert, Gordon Appleby*

IAIA Sections: *CSRM, Indigenous Peoples*

Exploring how IA engages with groups at risk of discrimination and inequality, from including women in engagement to EIA allowances for small companies to two key issues in involuntary resettlement (government and private sector approaches to valuation and livelihood restoration measures - case studies from Ghana and Malawi).

The value of EIA for disadvantaged SMMEs in SA

Stroebe, Kelly; Levendal, Minnelise; Mqokeli, Rirhandzu; Mogotshi, Reinet; Mqokeli, Babalwa; Retief, Francois

This paper aims to explore the value of the environmental assessment process to disadvantaged small, medium, and micro enterprises and to convey their experience of being part of this process.

Putting urban livelihood restoration into practice

Francis, Patrick; Drew, Sarah; Chipango, Pelekelo

Success stories, challenges, and lessons learned from Lusaka water supply, sanitation and drainage project urban livelihood restoration program.

Gender, engagement and the culture argument

Factor, Gabriela; Gotzmann, Nora

The "respect for local culture" argument frequently functions to exclude women. We challenge this argument from both international human rights law and impact assessment practice perspectives.

Indigenous and vulnerable people, cultural heritage, and health

Saturday 19 May | 11:00-12:30 | 22G

Paper Session

Chair(s): *Geetha Ramesh, Inge Lindblom*

IAIA Sections: *Indigenous Peoples, Health, Cultural Heritage*

This joint session aims to promote a discussion with practitioners from different IA practice areas on how IA is helping or not to promote social justice and participation of indigenous and vulnerable people on decisions that may affect them.

The limitations of law and EIA, Praeksa community

Assavarak, Passanan

The limitations of law and EIA for the Praeksa landfill caused villagers to face health problems, to waste time on lawsuits, to take risk in using both surface and groundwater, and issues with food insecurity.

Justice for the Piikani people; science, tradition

McLaughlin, Paul; Knowlton, Troy

The study presents how Piikani Nation has changed, how they will continue to change, and how, if possible, some of those impacts can be mitigated for the future of Piikani members.

Communities affected by the mining industry

Assavarak, Passanan; Lerdsateanchai, Pakorn

Three communities affected from mining: Klity Creek is facing lead poisoning, Mae Tow (famous for rice farming) is contaminated, and villagers' human rights are violated in Wang Sapung.

Including Indigenous Knowledge in EIA in Australia

True, Denise

Improving Australia's protection of indigenous heritage, by the inclusion of traditional ecological knowledge in environmental impact assessment from lessons of the Canadian experience.

Indigenous Knowledge: A poetic narrative

Faty, Babalwa

I will be poetically talking about information and knowledge management, through the opportunity of honoring our indigenous knowledge and incorporating it into the sustainability agenda.

Social justice and community participation in impact assessment

Saturday 19 May | 11:00-12:30 | 12D

Paper Session

Chair(s): Ilse Aucamp

A range of topics related to community participation and social justice are covered. Remote sensing as a tool for social risk management, the potential impact of economic activities between countries on environmental justice, and causes of land-use conflict in mining communities are investigated. A community-based HRIA tool that enhances informed decision making on the community level is discussed.

State institutions, communities, and mining in Peru

Quispe-Zúñiga, Melissa Roxana; Callo-Concha, Daniel; Borgemeister, Christian; Greve, Klaus

Land-use conflicts related to mining activities in Peru are due to the absence of the state, remoteness, weak state institutions, and vulnerability of economy/environment.

Environmental justice between countries:

Infractions to environmental licenses

Bergamini, Kay; Araya, Gino

Exportation generates environmental impacts away from consuming countries, thus causing problems in terms of international environmental justice. Infractions to environmental licenses are analyzed.

Integrated spatial and environmental development

van Straaten, Dick

The integration of spatial and environmental decision-making processes concerning spatial development is very efficient to cope with future transition challenges.

INDIGENOUS PEOPLES AND ENVIRONMENTAL JUSTICE

Informing enviro-cultural justice in impact assessment

Saturday 19 May | 14:30-16:00 | 12A

Paper Session

Chair(s): Kapa Morgan, Tumanako Ngawhika Fa'au

IAIA Section: Indigenous Peoples

Building on Aashukan, informing cultural justice is the focus. Disaster, scarcity, and competition all result in prioritization of the majority while enviro-cultural costs are ignored. Often Indigenous Peoples are the minority. What examples can be shared that achieve the empowerment of environmental and cultural justice in impact assessment?

From "stones and bones" to songlines and dreamings

Munday, Jane

Can "cultural blindness" be overcome by studies that describes the intangible, value the spiritual, and explain context when considering impacts on the social and cultural fabric of communities?

Measuring the intangible

De Beer, Jessica

This presentation will explore two approaches to incorporating intangible aspects of the environment into the impact assessment and decision-making process in order to ensure environmental justice.

Empowering ecosystem and cultural justice

Morgan, Te Kipa Kapa Brian

How barriers are challenged and what is being achieved—linking monitored ecosystem trends to decisions is empowering because it brings transparency and accountability to decision making processes.

PUBLIC PARTICIPATION AND ENVIRONMENTAL JUSTICE

Effective public participation in extractive industries and energy sector (I)

Friday 18 May | 11:00-12:30 | 21ABC

Paper Session

Chair(s): Sven Schicketanz, Patrick Wieland

The session aims at identifying innovative features of effective public participation based on good practice examples from countries in transition as well as industrialized countries. The participants will discuss ways to reduce both social conflicts and environmental damage.

Next generation engagement: 5 key issues

Bice, Sara

What five issues will drive the next generation of community engagement for major projects? Join our discussion of findings from the Next Generation Engagement project.

Balancing tensions to achieve better outcomes

Hemphill, Cassandra J.

Incorporating cultural rationality as well as technical rationality results in robust, sustainable decisions. Dialogic deliberation and other strategies help environmental management (EM) practitioners balance tensions.

Gender and ESIA public consultations in Cameroon

Nkerbu, Presley; Nguene, Francois Roger; Molonge, Yaah Louise; Belanke, Christine Doumbe; Molonge, Thompson Namanga

This paper further investigates and evaluates gender involvement in the ESIA public consultation process and brings out the disparities, constraints and presents the benefits of fully engaging more women in the public participation process.

Social response for CCS facilities in Japan

Murayama, Takehiko; Nagaoka, Atsushi; Nishikizawa, Shigeo

Carbon capture and storage (CCS) facilities is one effective devices to mitigate the impacts of carbon dioxides. This presentation covers trend analysis of social response and attitudes of stakeholders.

Effective public participation in extractive industries and energy sector (II)

Friday 18 May | 14:30-16:00 | 21ABC

Paper Session

Chair(s): Sven Schicketanz, Patrick Wieland

The session aims at identifying innovative features of effective public participation based on good practice examples from countries in transition as well as industrialized countries. The participants will discuss ways to reduce both social conflicts and environmental damage.

How to improve public involvement

Kamijo, Tetsuya

A simple alternatives analysis method with a wide range of alternatives may produce an active discussion of alternatives, and may result in improvement of public involvement.

Strategy and tools for effective public participation

Wieland, Patrick; Treidel, Holger

Senace promotes an effective public participation through tools and guidelines that promote the inclusion and accessibility of oft-excluded citizens in the process of environmental decision making.

IA community participation smokescreen

Ngwenyama, David

IA provides the only space for community participation in project decision making. However, control of the process by the developer makes this space a mere smoke screen.

Comparison of public behavior in the public sector

Albayrak, Ali; Eraslan, İsmail Raci; Turan, Volkan; Eraslan, Selman

Behavior of people during public participation for energy projects are different than that during environmental investment projects.

Concurrent sessions

Effective public participation in extractive industries and energy sector (III)

Friday 18 May | 16:30-18:00 | 21ABC

Paper Session

Chair(s): *Sven Schicketanz, Patrick Wieland*

The session aims at identifying innovative features of effective public participation based on good practice examples from countries in transition as well as industrialized countries. The participants will discuss ways to reduce both social conflicts and environmental damage.

Key factors to gain support from Indigenous Peoples

De la Cruz-Novey, Alicia; Ronquillo, Rodrigo

A successful story about an 866km linear project in Guatemala that used several techniques to enhance fairness and competence procedures that are associated with successful engagement processes.

Public consultation at the environmental licensing

Mello, Gisela; Nabuco, Felipe; Ramos, Alysso

This paper discuss the main issues of public consultation during the environmental licensing process in Brazil based on information brought by the affected population of 5 transmission line projects.

Participation reform in Australia extractives

Marsh, Daniel

Evaluation showed that petroleum industry consultation practices are broadly ineffective and inefficient, and led to development of detailed practice statements and a series of EIA "reference case" tools.

Improving environmental justice in IA through public participation (I)

Thursday 17 May | 11:00-12:30 | 22DEF

Paper Session

Chair(s): *Sanna-Riikka Saarela*

The session focuses on procedural and distributive justice in impact assessment procedures. Research-focused and practical contributions present concrete examples of methods and practices that can better address environmental justice in IA. In addition, challenges and opportunities for procedural justice in IA processes are discussed.

Public participation in strategic environmental assessment

Meyer, Theunis; Cilliers, Dirk

The development of EMFs requires public participation. This presentation reports on whether such processes complied with process criteria, achieved "social goals," and improved decision-making tools.

Public engagement in EIA for new town in Hong Kong

Lung, William

This paper will provide an account of how public engagement in the EIA process in Hong Kong contributed in shaping the Hung Shui Kiu New Development Area to achieve the planning vision.

Continuous public involvement in EIA: CKR

Ng Yeun Ching, Queenie; Cheung, Wai Hung Tony; Ping Ping, Alice

The continuous public involvement of CKR is conducive to public support, preemptive to potential judicial review of the EIA approval, and contributive to positive environmental outcomes of the project.

EIA large-scale engagement: 2 million people

Kelly, Paige Diana; Maurtua Konstantinidi, Alexandra

Case study on large scale engagement: challenges and lessons learned of the public participation process regarding a telecommunication project impacting 2 million people in Namibia.

Determinants of participation in public hearings

Fonseca, Alberto; Castro, Laís; de Brito, Ludmila A.

Are project type, ownership, and affected area associated with biophysical and socioeconomic concerns raised in public hearings? This study explores this question in the context of 49 Brazilian EIAs.

Improving environmental justice in IA through public participation (II)

Thursday 17 May | 14:30-16:00 | 22DEF

Paper Session

Chair(s): *Sanna-Riikka Saarela*

The session focuses on procedural and distributive justice in impact assessment procedures. Research-focused and practical contributions present concrete examples of methods and practices that can better address environmental justice in IA. In addition, challenges and opportunities for procedural justice in IA processes are discussed.

Participatory justice: The social "sweet spot"

Munday, Jane

Participatory justice is the "sweet spot" where relationships are symmetrical, community and proponent perspectives have equal weight, and the community has real influence.

Public participation in Integrated Environmental Management

Skosana, Vusi

This presentation will demystify challenges and misconceptions about public participation related to decision making or developments requiring authorization.

Does IA meet stakeholder expectations? POSCO case

Mishra, Pradeep

The paper tries to analyze critically how the EIA and cost-benefit analysis (CBA) exercises failed to bring out the complexities of the POSCO project in Odisha.

Role of communities in development and assessment

Ip, Tsz Ying; Lee, Ka Man; U, Clara

This paper discusses how communities should be engaged in development plans and impact assessment projects in order to tailor design, gain public support, and achieve environmental justice.

Are the youth silent in environmental procedures?

Saarela, Sanna-Riikka

This paper discusses youth participation in environmental planning and decision-making processes such as EIA, land use planning, and environmental permit procedures.

AGRICULTURE, FORESTRY, AND FISHERIES

Environmental justice: Options for coastal communities

Wednesday 16 May | 15:00-16:30 | 12A

Paper Session

Chair(s): *Ijeoma Vincent-Akpu*

IAIA Section: *Agriculture, Forestry and Fisheries*

This session looks at negative impacts of development projects on coastal communities dependent on water and how available regulatory frameworks and best practices could be utilized by the coastal communities to avoid violence and build resilience.

Participatory justice and networks of trust

Lawrence, Andrew

Trust networks are often overlooked by socio-technical approaches to energy policy, and more specifically by South Africa's REIPPPP program. Two contrasting examples show their importance.

Public opinions on offshore windmill project

Lee, Sangyun

This study conducts a survey of 300 residents who live near the offshore wind mill project in Korea. Results suggest perceptual differences between residents supporting and opposing the project.

Tensions in Durban's City-Port governance

Molelu, Obakeng; Enserink, Bert

Market forces have made the port-city-environment an arena that is becoming the scene of conflicts and coalitions as actors fight for their values, perspectives and interests to be considered.

Promoting community resilience in Niger delta

Vincent-Akpu, Ijeoma; Obute, Gordian; Ndukwu, Benjamin

What coastal communities can do to prevent or minimize socio-economic dysfunction associated with environmental effects and enhance community resilience.

HRIA in the agricultural sector: A case learning session

Thursday 17 May | 14:30-16:00 | 12A

Workshop

Chair(s): Nora Gotzmann

This case learning session will take a deep-dive into two human rights impact assessments in the agricultural sector: a community-based assessment in the sugar industry, and a sector-wide assessment in the palm oil industry. Presentation of the case studies will be followed by interactive group discussions facilitated by the presenters.

Assessing impacts in the Myanmar palm oil industry

Bansal, Tulika

This presentation describes the process and findings of a sector-wide impact assessment of the palm oil sector in Myanmar and whether such an approach can be applied in other geographies.

Case study using community-based approach

Tamir, Irit

This presentation will highlight a land case in Brazil in a sugar supply chain using the community-based approach to Human rights impact assessment (HRIA).

Impact assessment and agriculture

Saturday 19 May | 11:00-12:30 | 12A

Paper Session

Chair(s): Theunis Meyer

IA in agriculture can be viewed from two angles. On one hand, it needs to assess the impact of agricultural practices on nature and humans. On the other hand, it needs to protect valuable agricultural land against the impacts of other developments. This session deals with many of these aspects.

Intensive agriculture projects:

Hurdle or contribution?

Bella, Aimee; Bakia, Mbianypr

Could intensive agricultural projects present major ecological hurdles rather than contribute towards reducing food poverty in Africa?

Agriculture on mine tailings dumps: Possible?

Legoale, Tshiamo; Sosibo, Ndabenhle

The possibility of having multi-purpose mining land is explored, and experiments on phytomining prove it possible.

Protection of SWSAs using NEMA (107 of 1998)

Bahindwa, Abigail

SANBI's BLU Project, together with partners, is piloting the listing of a subset of strategic waster source areas (SWSAs) under Section 24 (2A) of the National Environmental Management Act (No. 107 of 1998).

Protection and management of groundwater quality

Chande, Milika Mimi; Mayo, Alyoce; Nobert, Joel

A study to assess the protection and management of groundwater quality for urban aquifers of Lusaka in Ngwerere sub-catchment of Zambia.

Socio-ecological approaches for sustainable landscapes

Howard, Pippa

Options available to achieve objectives-based outcomes through the application of the mitigation hierarchy (MH) at an ecosystem level.

BIODIVERSITY AND ECOLOGY

Applying the mitigation hierarchy to address marine biodiversity impacts

Saturday 19 May | 14:30-16:00 | 22G

Paper Session

Chair(s): Jan-Willem van Bochove, Suzanne Livingstone

How can the mitigation hierarchy be applied to address marine biodiversity and ecosystem service impacts? What are some of the challenges and opportunities for implementing good mitigation practice? We bring together experiences from around the world to share new ideas, tools, and approaches for improving marine biodiversity outcomes.

Tools to support the mitigation hierarchy

Brooks, Sharon; Fletcher, Ruth; Grigg, Annelisa; Martin, Sharon; Regan, Eugenie; Thomas and Corinne Martin, Hannah

Tools exist to support the mitigation hierarchy. These include a data portal, the Integrated Biodiversity Assessment Tool, a data analysis product, and exploratory work on marine No Net Loss (NNL).

Good practice guidance for marine oil and gas

Holland, Twyla; Howard, Pippa

An introduction to FFIs "Good Practice Guidance for Oil and Gas operations in marine environments," designed to assist oil and gas operations to mitigate impacts to marine biodiversity and ecosystem services.

Addressing data paucity to improve avoidance

Cousins, Neil

Data paucity hampers effective avoidance and leads to impacts on marine biodiversity. These issues will be explored and some solutions provided, including predictive approaches and community science.

Governance innovations around marine offset

Jacob, Céline; Bas, Adeline; Scemama, Pierre

Governance issues around marine offset can draw upon insights from marine spatial planning initiatives and precedents from organizational innovations used in wetland mitigation systems.

Marine biodiversity offsetting in Australia

Niner, Holly; Milligan, Ben; Jones, Peter J. S.; Styan, Craig

Biodiversity offsetting developed with a terrestrial focus. I discuss the challenges posed by the use of the approach in marine contexts and how this has influenced current practice in Australia.

Marine biodiversity offsets:

Prospects and challenges

van Bochove, Jan-Willem; Livingstone, Suzanne

This talk explores some of the opportunities and unique challenges for implementation of averted loss, restoration and policy-based offsets to address unavoidable impacts to marine biodiversity.

Biodiversity offsets and people (I)

Saturday 19 May | 11:00-12:30 | 12C

Panel Discussion

Chair(s): Suzanne Livingstone, Katherine Gotto-Walton

We draw on real world offset projects to identify trade-offs between multi-stakeholder visions for offset management. Presenters will highlight lessons learned from their experiences and tools and techniques to develop a collaborative approach to offset design, establishment, and implementation using an interdisciplinary approach.

A participatory approach to offset actions

Cannon, Paul; Livingstone, Suzanne; Riddell, Michael; Sylla, Cheikh

Case study using a participatory approach to develop biodiversity offset actions with positive landscape-level outcomes for both biodiversity and people.

Biodiversity mitigation hierarchy and communities

Gaylord, Lisa

QMM's biodiversity mitigation program in Madagascar is based on an integrated spatial approach by targeting land, ecosystems, natural resources management, and community stewardship.

No Net Loss for people and biodiversity

Griffiths, Victoria; Bull, Joseph; Baker, Julia; Milner-Gulland, E.J.

Biodiversity offsets should not make people worse off, but understanding is lacking concerning how to achieve No Net Loss with regard to people's provisioning and cultural values for biodiversity.

The local impacts of biodiversity offsets

Jones, Julia P. G.; Bidaud, Cecile; Schreckenberger, Kate

Using the case of the Abatovy mine, Madagascar, we explore the ways in which offsets can impact local populations and the reasons for a gap between international standards and implementation.

Biodiversity offsets and people (II)

Saturday 19 May | 14:30-16:00 | 12C

Panel Discussion

Chair(s): Suzanne Livingstone, Katherine Gotto-Walton

We draw on real world offset projects to identify trade-offs between multi-stakeholder visions for offset management. Presenters will highlight lessons learned from their experiences and tools and techniques to develop a collaborative approach to offset design, establishment, and implementation using an interdisciplinary approach.

Innovative responses to biodiversity offsets in Durban

Mullins, Greg; Douwes, Joanne; Nkosi, Sabelo; Ralfe, Kate; Dlamini, Zama; Macfarlane, Doug

A pilot project in Durban to advance the science around biodiversity offsets and translate this into practical implementation and policy development.

Concurrent sessions

Net ecosystem services analysis for mitigation

Reub, Greg; De la Cruz Novey, Alicia; Roca, Roberto

This presentation will provide an overview of a methodology that is an equitable and quantified approach for providing biodiversity and ecosystem services mitigation and offsets.

Biodiversity offsets: A competent authority view

Moses, Malcolm

The trend for developments, subject to an EIA and requiring a biodiversity offset is on the rise. This is a government perspective on the effectiveness of offsets and solutions to improve the status quo.

Coral offset in Vanuatu

Takeda, Shingo; Murayama, Takehiko; Nishikizawa, Shigeo

A new marine protected area (MPA) was registered in Vanuatu to compensate the coral loss due to development projects after series of environmental and social survey and stakeholder meetings.

Do biodiversity offsets deliver equitable outcomes?

Friday 18 May | 16:30-18:00 | 11

Paper Session

Chair(s): Susie Brownlie, Amrei von Hase

IAIA Section: Biodiversity and Ecology

Biodiversity offsets aim for “no net loss” of biodiversity for current and future generations, striving for equity. Many see this goal as “symbolic,” not explicit. This session explores the basis for biodiversity offsets in different contexts, to examine how effective they are likely to be in helping curb biodiversity loss.

Biodiversity offsets: No clear destination?

Brownlie, Susie; von Hase, Amrei

Biodiversity offsets aim for “no net loss” of biodiversity at least. But are imprecise objectives and poorly defined frames of reference perpetuating biodiversity loss now and for the future?

Exploring loss-gain scenarios for a robust policy

von Hase, Amrei; Parham, Erin

The introduction of robust No Net Loss or Net Gain-type goals can benefit from good preparatory work, including gap analyses, risk assessment, and exploratory loss-gain analysis to inform robust policy formulation.

Reframing compensation for nature and people

Quétier, Fabien; Chamagne, Juliette; Garcia, Anna; Dessard, Hélène; Garcia, Claude; Souquet, Mathieu

Drawing lessons from a diversity of compensatory approaches worldwide, we discuss how to frame and achieve positive outcomes for both nature and people.

Counterbalancing loss with protection—not gain

Manuel, Jeffrey; Ginsburg, Aimee

In the South African context, counterbalancing loss for protection, rather than No Net Loss/Net Gain, provides for a more consistent, measurable, and transparent basis for measuring equitable outcomes from offsets.

Enabling approaches for promoting offsets in India

Rajvanshi, Asha

The paper attempts to share the experience of emerging “offset-like” approaches in regulating developments in all major sectors of economy and particularly transportation, mining, and energy.

Use of natural capital to preserve biodiversity

King, Virginia

Integrating natural capital and associated ecosystem services into project planning can support preserving biodiversity, in the midst of project execution. This presentation presents a methodology to support this goal.

Greening the transport sector through smart plans and eco-friendly designs

Friday 18 May | 14:30-16:00 | 12D

Panel/Workshop

Chair(s): Bruce Dunn, Vinod B. Mathur

IAIA Section: Biodiversity and Ecology

This session builds on the outcome of the Hanoi Forum on Sustainable Infrastructure, emphasizing opportunities for countries to strengthen policies and practices for avoiding biodiversity loss and greening transport infrastructure. This session discusses best practice for eco-friendly project designs, critical challenges and needs, and efforts to strengthen implementation capacity globally.

Mainstreaming mitigation: The Indian experience

Mathur, Vinod; Rajvanshi, Asha

The paper shares a range of mitigation options and highlights experience gained in implementation in road, rail, and power sectors to achieve a win-win situation for both development and conservation.

Guiding principles for sustainable infrastructure

Newman, Kate; Dunn, Bruce; Yangzom, Karma

Infrastructure investment is accelerating. The presentation will discuss new “guiding principles” to improve infrastructure sustainability and resilience through better planning and design.

IA and biodiversity

Thursday 17 May | 14:30-16:00 | 12D

Paper Session

Chair(s): Nicholas King

This session explores several different approaches to assessing impacts on biodiversity across various development sectors and varying habitats. Case studies range from Iraq, to mining in Zambia, to the mountains of Lesotho.

Critical, natural, and modified habitat in ESIA

Coroi, Mihai

We will attempt to clarify issues with definitions and differences between modified and natural habitat, and will present a 2-stage critical habitat assessment that fits better in the ESIA process.

Planning biodiversity monitoring in Iraq

Kor, Laura; Coroi, Mihai; Fant, Mia

A long-term biodiversity monitoring plan was developed for a project in a sensitive biodiversity area, within a country affected by conflict. Innovative methods were designed to overcome challenges.

What if we could mine in protected areas/wetlands?

Ngwenyama, David

Three mines are to be developed in Lochinvar National Park, reversing an earlier decision. These projects have had no full IA despite being in a high biodiversity and ecologically sensitive area.

Biodiversity conservation and mining in sensitive areas

Buhanga, Edgar

Eco-toxicological study undertaken in the Dura Limestone Mining near a Ramsar Site to establish bio-accumulation of heavy metals by indicator species. Results showed lead beyond national standards.

Trekking for Thoboshana: Conserving the Maloti minnow

McCarfetty, James; Monongoaha, Palesa

Trekking for Thoboshana—Efforts to conserve the endemic Maloti minnow (*Pseudobarbus quathlambae*) in the Lesotho highlands.

Mechanisms for biodiversity conservation (I)

Friday 18 May | 11:00-12:30 | 11

Paper Session

Chair(s): Dirk Cilliers

This session explores different mechanisms to promote biodiversity conservation and the sustainable management of sensitive environments. Mechanisms include environmental licensing, fiscal provisions, and legal provisions as well as innovative methodologies and project level plans.

Biodiversity sanctions under the new environmental framework

Perez, Cristian; Bergamini, Kay

The study, made using data gathered by the researchers, highlights the main infractions associated with biodiversity under the new environmental framework.

Environmental licensing as an important instrument

Borges, Antônio; Souza, Katia

This paper aims to highlight the importance of environmental management in the improvement of transmission lines and in the preservation of biodiversity.

Adaptive dredging and sea turtle conservation

Patiri, Victor; Lopez, Gustavo; Teixeira, Vicente;

Santarossa, Leonardo; Teixeira, João; Brandl, Carolina

Case study of the development of an adaptive dredging plan to Port of Açú, Brazil, in the area of environmental sensitivity due to the presence of nesting sea turtles.

Property rights on agricultural productivity

Vincent-Akpu, Ijeoma; Hart, Aduabobo; Obute, Gordian

This paper is on effects of property rights and land tenure on socio-economics of Niger Delta, available tools for them, and the role of different stakeholders in ensuring agricultural sustainability.

Mechanisms for biodiversity conservation (II)

Friday 18 May | 14:30-16:00 | 11

Paper Session

Chair(s): Dirk Cilliers

This session explores different mechanisms to promote biodiversity conservation and the sustainable management of sensitive environments. Mechanisms include environmental licensing, fiscal provisions, and legal provisions as well as innovative methodologies and project-level plans.

Species distribution and resilience range

Chung, Hye In

Extracting species distribution and establishing the concept of resilience range using species distribution models (SDMs) based on new ensemble methodology.

Financial mechanism for the maintenance of protected areas

Borges, Antônio; Souza, Katia

This article demonstrates how the allocation of environmental compensation resources of licensed projects contributed to the management of protected areas in the different Brazilian biomes.

Risk management based on FAO normative functions

Davis, Mark; Morra, Daniela

Environmental and social risks in food and agriculture projects are managed by guiding formulators through a semi-automated system that links risk management strategies to FAO's normative functions.

Adaptation potential of SADC's dryland forests

King, Nicholas

Proactive adaptation policies are urgently needed for SADC's large dryland areas. New approaches for the key dryland forests sector, incorporating community-based management, are described.

Integrated spatial and environmental development

van Straaten, Dick

The integration of spatial and environmental decision-making processes concerning spatial development is very efficient to cope with future transition challenges.

Planning for and implementing No Net Loss/Net Gain of biodiversity goals: Approaches, challenges, and solutions (I)

Friday 18 May | 11:00-12:30 | Hall 2A

Paper Session

Chair(s): Amrei von Hase, Juan Pablo Carrera

The session will provide examples on how the mitigation hierarchy can be successfully integrated into the EIA process, and will discuss how the application of the principle can contribute effectively to biodiversity conservation, also considering challenges and risks.

Recent legislative developments in Latin America

Brooks, Sharon; Rogalla von Bieberstein, Katharina; Ognibene, Lara

Recent legislative developments to foster the application of the mitigation hierarchy in the EIA process will be presented, with a focus on Latin America.

Mitigation hierarchy in Peru: Legal framework

Carrera, Juan Pablo; Ramirez, Aldo

This presentation will analyze the legal situation and the advances that they have on the implementation of instruments for the mitigation of impacts.

Biodiversity offsets in South Africa's EIA system

Manuel, Jeffrey; Ginsburg, Aimee

Offset implementation in a policy vacuum created challenges, but also opportunities, to tailor the concept to support implementation of the mitigation hierarchy.

When are aggregated and anticipated offsets effective?

Quétier, Fabien; Sarmiento, Mariana; Victurine, Catherine; Rainey, Hugo; Victurine, Ray; Souquet, Mathieu

Drawing lessons from the development of habitat banking models in contrasting contexts, we discuss challenges and opportunities for more effective implementation of the mitigation hierarchy.

Planning for and implementing No Net Loss/Net Gain of biodiversity goals: Approaches, challenges, and solutions (II)

Friday 18 May | 14:30-16:00 | Hall 2A

Paper Session

Chair(s): Amrei von Hase, Juan Pablo Carrera

The session will provide examples on how the mitigation hierarchy can be successfully integrated into the EIA process, and will discuss how the application of the principle can contribute effectively to biodiversity conservation, also considering challenges and risks.

Biodiversity data and mitigation hierarchy in Mozambique

Costa, Hugo M. R.; Videira, Eduardo; Rainey, Paulino; Sidat, Naseeba; Rainey, Hugo; Victurine, Ray

This case study undertaken in Mozambique by the company Impacto and Project COMBO gives valuable insights and lessons learned on how biodiversity data can inform an adequate mitigation hierarchy plan.

Objectives-based ES conservation in Colombia

Howard, Pippa

Oil and gas development offshore La Guajira, Colombia, requires attention to local community social and cultural preferences.

Linear infrastructure in Lesotho: Getting it right

Hughes, Jessica

Achieving effective implementation of the mitigation hierarchy through optimization of road and powerline alignments for an EIA in Lesotho.

Implementing biodiversity offsets in Gamsberg

Asante-Owusu, Rachel; Edwards, Steve

The session will highlight lessons learned in implementing biodiversity offsets towards a No Net Loss outcome in the Northern Cape region of South Africa.

Regional conservation assessments: Value, process, and case studies

Thursday 17 May | 11:00-12:30 | 12A

Paper Session

Chair(s): Dennis Grossman

The motivation behind this session is to encourage the development and implementation of a standard Regional Conservation Assessment (RCA) approach. This session will explore different RCA practices that have been implemented around the world. The RCA benefits to regional conservation and development planning and implementation will be explored.

Analysis of an ecologically healthy area

Ryu, Jieun; Jeon, Seong Woo; Lee, Kyung-Il; Hwang, Jinhoo

This study not only considered the health and diversity of the ecosystem but also optimized the evaluation results through the mechanical learning method.

Ecosystem service mapping by integrated ES modelling

Hayashi, Kiichiro; Kobayashi, Wataru; Ooba, Makoto
Based on the assessment of the ES potential supply mapping, an integrated ES modelling approach was employed to view the results of ES potential mapping.

Mainstreaming regional conservation assessments across California

Grossman, Dennis

Application of regional conservation assessment methods for California's Mojave Desert ecoregion. The assessment products inform the development and implementation of integrated regional conservation and development plans.

Toward effective implementation of the mitigation hierarchy in EIA process: Case examples

Friday 18 May | 16:30-18:00 | Hall 2A

Paper Session

Chair(s): Johan Nel

The session provides examples on how the mitigation hierarchy model has been or can be integrated into the EIA and decision making process. The case studies explored in this session offer real case examples of and experiences with the adoption and implementation of the hierarchical impact mitigation and management model in biologically diverse areas.

Concurrent sessions

South American offset policies in practice

Campbell, Genevieve; Putri, Tami; Regan, Isabel; Tatum-Hume, Emma; Regan, Eugenie; Edwards, Steve
South American governments are leaders in developing biodiversity offsets policies that align with international best practice standards. However, their implementation remains a challenge.

The mitigation hierarchy before and beyond EIA

Raine, Hugo; Costa, Hugo; Quétiér, Amrei; ten Kate, Kerry; Quétiér, Fabien; Victorine, Ray
EIA has a role in mitigating biodiversity impacts, but outcomes are better if mitigation starts before design, if government leads landscape planning, and if lenders assure long-term outcomes.

IA standardization and the mitigation hierarchy

Fonseca, Alberto; Rivera, German; de Brito, Ludmila A.; Cunha, Karine
How may the lack of standardization affect the use of the mitigation hierarchy in EIAs? This study explores this question in the context of 49 Brazilian EIAs.

Improving EIAs on linear projects

Roca, Roberto; Ronquillo, Rodrigo
PS6-IFC Critical habitat identification and application of the mitigation hierarchy to transmission lines.

Amending approved biodiversity mitigation measures

Valencia, Claudia
A case study shows how new measures following the mitigation hierarchy had to be devised to protect a reclassified locally endemic species during project operations.

Adapting coastal communities to climate change

Koroma, Ranita
Presentation of the findings from a climate change vulnerability assessment and the preparation of a guide to adaptation planning for coastal communities in Sierra Leone.

Finding agency for climate justice

Seekamp, Erin; Jurjonas, Matthew
An adaptive capacity assessment informed by coastal resilience and rural sociological literatures engaged marginalized rural coastal communities of eastern North Carolina (US).

Heat wave-related damage

Je, Minhee; Jung, Seunghyun; Kim, Hyomin
This study aims to analyze vulnerable regions of thermal environments in the present and future, thereby analyzing and discussing the main occurrence factors by region of classified thermal environment.

Climate change and impact assessment: Good practice cases (II)

Thursday 17 May | 14:30-16:00 | 21 ABC

Paper Session
Chair(s): Arend Kolhoff
IAIA Section: Climate change

This session will provide the opportunity for people and organizations to share their good practice experiences with the integration of climate change issues in EIA as well as SEA. We welcome good practice cases on climate change adaptation and mitigation for all types of impact assessment and all sectors.

Integration of climate change adaptation to EIA in Korea

Lee, Youngsoo
Integration of climate change to the EIA is more effective than preparation of a new act in mainstreaming climate change adaptation in policy, plans, program, and projects in Korea.

Developing SA framework for the Thai context

Chanchitpricha, Chaunjit; Bond, Alan
A sustainability assessment framework is developed for the Thai context and is applied as a pilot study to Thailand's climate change master plan 2015-2050.

GHGs management along agricultural value chain in Nigeria

Salau, Ibrahim; Agbaje, Abbas; Olaogun, Atanda
This study is the first to consider the applicability of farm-level and agricultural value chain greenhouse gas (GHG) emissions from agriculture through the farm-to-fork value chain.

Impact assessment of land degradation and desert

Muhammad, Usman
The research adopted two theories: Deep Ecology and Weak Anthropocentric. Findings demonstrate that soil in northern Nigeria has low nutrients now compared to 30 years back.

IAIA's climate change and impact assessment next steps

Friday 18 May | 11:00-12:30 | 12D

Roundtable
Chair(s): K.C. Lam, Ana Maria Quintero
IAIA Section: Climate Change

How are IAIA and IA practitioners responding to the recommendations outlined in the Paris Agreement on Climate Change? We review actions that have been taken by IAIA and identify other initiatives we might take through impact assessment to reduce carbon emissions and mitigate climate impacts globally and locally.

CSRM

Social license to operate: Expectations of communities vs. corporates

Saturday 19 May | 11:00-12:30 | 21DEF

Pecha Kucha
Chair(s): Sara Bice, Philippe Hanna
IAIA Sections: Indigenous Peoples, CSRM

Join us for a fast and furious Pecha Kucha session where we interrogate the complex and controversial social license to operate (SLO). Our panelists will delve into the diverse and often divergent expectations of communities vs. corporates when it comes to SLO. How are these expectations formed? Can these differences be reconciled? And what role could IA play in helping to bridge the gap?

Managing social risks: The engagement process

Bolton, Robin
The expectations and views of indigenous communities versus corporates regarding engagements pre-, during, and post-projects will be explored.

Due diligence: Social license if positive impact

Rodríguez, Edna; Moreno, Andrea
Due diligence as a tool for mitigating and compensating social and environmental impacts through risk management and the design and execution of social impact investment portfolios (participatory).

Oil industry and SLO in the Ecuadorian Amazon

Diantini, Alberto; Pappalardo, Eugenio Salvatore; Codato, Daniele; De Marchi, Massimo
Critical analysis of social license to operate (SLO) tool efficacy in the oil context of the Ecuadorian Amazon: examination of expectations from locals and oil enterprise in relation to community engagement and consultation.

The NSW coal seam gas industry: Textbook case of SLO loss

Snashall, David
The New South Wales (NSW) coal seam gas (CSG) industry was destroyed when its social licence to operate was withdrawn. However, just across the border, the industry thrives in Queensland. How did this situation occur?

CLIMATE CHANGE

Climate change and impact assessment: Good practice cases (I)

Thursday 17 May | 11:00-12:30 | 21 ABC

Paper Session
Chair(s): Arend Kolhoff
IAIA Section: Climate change

This session will provide the opportunity for people and organizations to share their good practice experiences with the integration of climate change issues in EIA as well as SEA. We welcome good practice cases on climate change adaptation and mitigation for all types of impact assessment and all sectors.

ES use in climate adaptation in northern Sweden

Boltemo Edholm, Jenny
Presence of knowledge and assessments of ecosystem services in local planning, decision making, and climate adaptation in northern Sweden.

Climate change impacts on New Katembe, Mozambique

Bettencourt, Pedro; Canas, Ângela; Fulgencio, Cláudia; Jesus, César
The paper presents recent studies of the impact of climate change in the Katembe territory of the south Mozambique shoreline and the way conclusions were integrated in planning for a new city.

Assessing cultural heritage significance and risk

Saturday 19 May | 11:00-12:30 | 22DEF

Paper Session

Chair(s): Christopher Polglase, Ishanlosen Odiaua
IAIA Section: Cultural Heritage

We address evolving perspectives on the assessment of cultural heritage significance and risks. We draw on varying examples to document how cultural heritage significance of characterized and how risks are calculated and then follow with an open discussion.

The need to recognize World Heritage in SEAs

Jo, Eugene; van Merm, Remco

Considering cultural resources in SEAs proves to be beneficial in attaining better sustainable development, by including social and cultural factors, as highlighted in the management of World Heritage.

Heritage dissonance and impact assessment

Patiwael, Patrick

This paper discusses how heritage dissonance on different geographical levels can influence the impacts assessed within a heritage impact assessment (HIA).

IA as a management tool for World Heritage

Jo, Eugene; van Merm, Remco

Heritage impact assessments should recognize both universal and local values to grasp both positive and negative impacts of change on World Heritage properties.

Optimizing planning in vulnerable coastal zones

Seekamp, Erin; Eaton, Mitchell; Xiao, Max; Fatorić, Sandra; Xiao, Xiao; McCreary, Allie

A climate adaptation planning tool for historic preservation in coastal zones at risk to flooding that includes measures of vulnerability, adaption costs, and the relative historic value of buildings.

Flood risk management and cultural heritage

Bedeaux, Dietske; Augustyn, Anna; Van t Wout, Tamara; Amsing, Eline

With cases studies we will show the challenge of flood risks and the need for assessing the impact on tangible and intangible heritage.

Using modeling to manage cultural heritage risk

Polglase, Christopher

I will discuss cultural heritage risks, outline the challenges associated with defining heritage baseline conditions, and suggest approaches for modelling heritage and associated risks.

Managing cultural heritage in urban and rural landscapes

Saturday 19 May | 14:30-16:00 | 22DEF

Paper Session

Chair(s): Inge Lindblom

This session focuses on cultural heritage in urban and rural landscapes, including its interdisciplinary nature. Cultural heritage is an important component because it involves different topics relevant to landscape. Papers are related to cultural heritage and sustainable development in culturally-significant urban and rural areas.

How to bridge the gap between EIA and HIA

Appendino, Federica

This paper discusses the consideration of cultural heritage in environmental impact assessment (EIA) by presenting a specific case study: Saint-Vincent-de-Paul eco-neighborhood in Paris.

The Dutch approach to heritage impact assessment

Patiwael, Patrick

This paper describes how the heritage impact assessment framework has contributed to the sustainable development of the Defense Line of Amsterdam in the Netherlands.

Impact assessment for natural World Heritage Sites

van Merm, Remco; Jo, Eugene

This presentation sets out IUCN's 8 principles for environmental assessments of development proposals that may impact on natural World Heritage Sites, to enable adequately informed decision-making.

What do we see? Discovering landscapes

Skulberg, Per Kristian

Is a development plan "far away" from cultural heritage sites, or is an enterprise "in the midst of" a unique cultural heritage landscape? Focus on the trouble of "unrecognized" heritage.

DIGITAL IA

Digital impact assessment: The latest developments

Saturday 19 May | 11:00-12:30 | 21ABC

Paper Session

Chair(s): Malcolm Roods, Paul Eijssen

This session highlights latest achievements and innovations in digital impact assessment reporting, reviewing, and communication. We focus on sharing and discussing state-of-the-art IA project showcases, approaches, and interactive tools like virtual reality to support informed decision making in a society in digital transition.

Digital IA reporting: The next step

Eijssen, Paul

IA reporting is moving towards a digital way of working. This session highlights where we are in our developments, how we anticipate this to evolve, and how our customers think about digital IA.

Toward digital IA: Requirements from a government

Martins Dias, Luis; Barten, Bart; De Vries, Hans

This paper will discuss opportunities and challenges for governments with the ambition to apply digital and interactive IA. It is based on several presentations and discussions about digital IA.

Analysis in environmental geo-informatics with UAV

Zhu, Yongyan

The usability analysis of the fourth industrial revolution technologies in environmental geo-informatics with unmanned aerial vehicles (UAV).

A rapid tour of emerging technologies and IA

Orenstein, Marla

Enjoy an amusing and informative tour of emerging technologies: what they are and how they may influence how impact assessment is practiced in the future.

Digital innovation: Experiences with developing IA online platforms

Saturday 19 May | 14:30-16:00 | 21ABC

Paper Session

Chair(s): Thomas Fischer, Julia Nowacki, Sam Hayes

Experiences from developments (on and offline) which have sought to support impact assessment practice, professional development, and the development of professional communities.

Building an online platform to support IA practice

Hayes, Samuel; Fischer, Thomas; Nowacki, Julia

This presentation demonstrates a beta version of an online platform to support IA practitioners and related professionals with the consideration of health—both in HIA and environmental assessment.

A database with EA country legislation

Hardon, Anne; Buit, Gerlinde

What do a professional and a layman want to find in an online database with EA legislation? Following a survey, the NCEA translated the outcomes in the restyling of their country profile database.

Digital innovation, a tool for aligning IA efforts

Rodriguez Macias, Edna Liliانا; Moreno, Andrea

IA digital innovations act as a bridge between the amount of information produced and the ability to integrate it, helping institutions and researchers in the successful alignment of efforts.

Spatially varying impact significance assessment

Sileryte, Rusne

Spatially varying impact significance assessment is introduced as an innovation to support creating and assessing place-based eco-innovative spatial development strategies to reduce waste flows.

Concurrent sessions

DISASTERS AND CONFLICT

Disasters, conflict, other crises, and impact assessment

Thursday 17 May | 14:30-16:00 | 21DEF

Paper Session

Chair(s): Charles Kelly

IAIA Section: Disasters and Conflict

A session on crisis, disasters, and other crisis and impact assessment.

Analyzing the Dutch syndrome in mineral rich countries

Bakia, Mbianyor; Bella-Corbin, Aimee

Why do mineral-rich post-conflict fragile countries continue to find themselves in a spiral of endless poverty?

Slavery and the environment: A need for a new IA?

Abrusci, Elena

A discussion on the need to establish a newly-tailored modern slavery impact assessment to address the critical multifaceted nature of modern slavery in conjunction with environmental injustice.

Bridging IA and mediation in environmental conflict

Peltonen, Lasse; Brown, Michael; Sairinen, Rauno

In the face of conflict, IA needs to be performative, legitimate, and socially robust. Its outcomes do not depend on data alone: they depend on legitimacy and institutional settings of the process.

Disaster risk of property development on floodplains

Mmom, Prince Chinedu; Iluyemi, Patrick Olorunloba

Rapid urbanization of Port Harcourt City, Nigeria, has led to encroachment into natural flood basins, thus increasing their vulnerability to disasters.

The politics of post-disaster EIAs

Kelly, Charles

The politics of whether and to what end post-disaster EIAs take place and how politics will be influenced by an ongoing review of post-disaster EIA tools.

Enhancing disaster risk reduction and resilience: What role ESIA can play

Friday 18 May | 11:00-12:30 | 21G

Paper Session

Chair(s): Angelo Jonas Imperiale, Frank Vanclay, Charles Kelly, Chizoba Chinweze, Abbas Suleiman

This session reflects on the role social impact assessment can have in enhancing, locally, disaster risk reduction and resilience of people and places at risk. We explore the value in IA of assessing prevention and community resilience in post-disaster and development interventions.

Flood risk management and cultural heritage

Bedeaux, Dietske; Augustyn, Anna; Van t Wout, Tamara

With cases studies we will show the challenge of flood risks and the need for assessing the impact on tangible and intangible heritage.

EIA/Planning for floods and droughts in Freetown

Nelson, Peter

This paper presents plans for dealing with flooding, drought, mudslides, and other natural and man-made disasters in Freetown, Sierra Leone.

Social impact and extreme events:

An inclusive model

Walker, Heidi

This presentation examines how assessing socially-differentiated impacts of an extreme event can contribute to inclusive climate change adaptation, disaster risk reduction strategies, and IA.

Diagnosing environmental damages from carcass

Hwang, Sang-il; Cha, Eun-Jee; Hyun, Yunjung

We developed a tool (worksheet) to diagnose simple environmental damages in a community with carcass disposal site(s).

Integrated strategic environmental assessments for post-crisis recovery

Friday 18 May | 16:30-18:00 | 22G

Panel Discussion

Chair(s): Karen Sudmeier-Rieux, Samuel Yonkeu

What do Sri Lanka, Nepal and Côte d'Ivoire have in common? They are all post-crisis countries with needs for rapid planning while promoting sustainable reconstruction and recovery. This session describes lessons learned from applying integrated strategic environmental assessments to post-crisis countries and how these lessons can be applied elsewhere.

Opportunity Mapping in post-crisis Sri Lanka

Mallawatantri, Ananda; Pathirage, Sandamali

This presentation details the development of an integrated strategic environmental assessment process that was undertaken after the 33-year long conflict in the Northern Province of Sri Lanka.

Post-crisis (I)SEAs: What's different?

Sudmeier, Karen; Yonkeu, Samuel; Estrella, Marisol

Based on country experiences, this presentation explores the two-dimensional approach of ISEAs: post-crisis and long-term while addressing disaster risks.

EXTRACTIVE RESOURCES

Experiences with SEA in the oil and gas sector

Thursday 17 May | 16:30-18:00 | 21G

Paper Session

Chair(s): Ineke Steinhauer

How to make use of SEA in the oil and gas sector and how to improve its effectiveness. Best practice cases of SEA in the oil and gas sector will be shared, with focus on examples where SEA implementation has been more or less successful and the reason why.

SEA for the identification of energy corridors

Walsdorff, Annick; Abed, Rohaida; Ngema, Samukele

The identification of suitable strategic corridors for the development of an onshore gas pipeline network has the potential to unlock further growth possibilities for the gas industry in South Africa.

When a SEA normative fails: Lessons from Brazil

Vilardo, Cristiano; Évora, José Eduardo

The 2012 Brazilian SEA regulation to oil and gas remains non-implemented. We analyze the mix of factors explaining that failure, both conjunctural and substantive. How can a consensus normative fail?

How to make SEA more effective in the oil and gas sector

Steinhauer, Ineke

Best practise in SEA for the oil and gas sector, with focus on good examples where SEA implementation has been successful.

GOVERNANCE AND IMPLEMENTATION

Governance and implementation: Example reforms of environmental permitting and review

Saturday 19 May | 14:30-16:00 | 11

Workshop

Chair(s): Cheryl Wasserman

IAIA Section: Governance and Implementation

Participants will discuss current reform efforts for more efficient and effective ESIA implementation by countries and development banks facing similar implementation challenges and system weaknesses.

The harmonization of EIA in the SADC region (I)

Wednesday 16 May | 15:00-16:30 | 11

Sponsored by Department of Environmental Affairs

Facilitator: Ishaam Abader, Deputy Director, General:

Department of Environmental Affairs

Discussions

Harmonizing the definition of the term "Environment" in the region in order to allow the biophysical and social and economic dimensions of the environment to receive equal attention in impact assessments for large capital projects.

To develop a shared understanding of what is meant by key terms such as "social," "gender," "health," etc. in environmental assessments (EAs) and environmental justice in societies in transition generally.

The harmonization of EIA in the SADC region (II)

Thursday 17 May | 09:00-10:30 | 21ABC

Sponsored by Department of Environmental Affairs

Facilitator: Ishaam Abader, Deputy Director, General:

Department of Environmental Affairs

Discussions

To develop a common understanding of what it will take for Member States to revise their EA Acts, guidelines, and regulations in alignment with the harmonized definitions.

To create a platform for sharing information and learning on EAs by Member States and Secretariat.

Develop a road map for the harmonization process.

Key commitments and resolutions reached.

HEALTH IMPACT ASSESSMENT

Are the SDGs an opportunity to guide a regulatory framework for HIA?

Thursday 17 May | 16:30-18:00 | 12C

Workshop

Chair(s): Mark Divall

IAIA Section: Health

Health impacts are often not adequately considered in policy or project development. This session explores the potential to include the Sustainable Development Goals (SDGs) or other in the promotion of a more robust regulatory framework, including presentation of case studies ideally from low and middle income countries.

SDGs and HIA in Africa: The HIA4SD project

Winkler, Mirko

The HIA4SD Project analyzes the conditions under which impact assessments are an effective regulatory mechanism to mitigate negative externalities from resource extraction and contribute to the SDGs.

Enriching ES(H)IAs with the natural and social capital concept

Friday 18 May | 11:00-12:30 | 12C

Workshop

Chair(s): David Thelen, Frank Wildschut

The broad scope of the natural and social capital concepts can enrich ES(H)IAs. They can help unravel the complexities of impacts, disclose dependencies, and further improve mitigation options. This can increase the opportunities to make developments more sustainable, on site and in the value chain.

Natural capital strengthens ESIA: Early evidence

Rahill, Bilal; White, Elizabeth

Application of the Natural Capital Protocol in the agri-business sector demonstrates the potential for natural capital approaches to supplement impact assessment and risk management approaches.

HIA and health in EIA: Legislation and implementation

Friday 18 May | 14:30-16:00 | 12C

Paper Session

Chair(s): Filipe Silva, Lindsay McCallum

IAIA Section: Health

HIA considers the interface between the social / biophysical environment and human well-being by characterizing the consequences of development on health. The session presents recent examples of HIA methods and tools, evaluation of practice in the private sector, and assessment of health impacts within EIA sparked by the new European EIA directive.

DHIS 2 as an HIA tool for low-resource settings

Saunders-Hastings, Patrick; Perrin, Maureen; Uggowitzer, Petter; Sæbø, Johan; Uggowitzer, Steven

This paper examines the value of the District Health Information Software in gathering data to inform risk, vulnerability, and impact assessments in low-resource, humanitarian, or crisis settings.

Systematic improvement of health mitigation

Xiao, Yina; Uberti, Filippo; Mwatembo Msagha, Erasmo; Namer, Giada; Mwatembo Msagha, Raphael

Eni conducted an internal review to appraise HIA studies and mitigation plan strategy to identify possible gaps in the assessment phase and/or in the mitigation plan implementation.

New directive. New world? Health and EIA

Cave, Ben; Fothergill, Josh; Pypers, Ryngan; Gibson, Gillian

The directive that frames the Environmental Impact Assessment (EIA) Directive now includes population and human health. Action is needed now to shape the way this topic is assessed.

Shaping of a perfect HIA: Barriers in achieving the same

Friday 18 May | 11:00-12:30 | 12A

Pecha Kucha

Chair(s): Geetha Ramesh, Francesca Viliani

IAIA Section: Health

This session will briefly present various HIAs conducted by experienced HIA practitioners around the world and the discuss ways to better it while trying to comprehend the road blocks along the way.

INDIGENOUS PEOPLES

Aashukan, one year later

Friday 18 May | 16:30-18:00 | 12C

Paper Session

Chair(s): Kepa Morgan, Philippe Hanna

IAIA Section: Indigenous Peoples

In 2017, the Indigenous Peoples Section organized Aashukan, designed to build bridges between communities and proponents through IA. This session will revisit the lessons from Aashukan. Presenters are encouraged to bring case studies that exemplify (or not) the principles from Aashukan to continue the discussion initiated in 2017.

IBA timing is everything

Courcelles, Réal; Dunn, Marc

Signing an impact benefit agreement (IBA) prior to an EIA is a first step in a long-term relationship.

Can Traditional Knowledge inform IA?

Fa'au, Tūmanako; Morgan, Kepa; Kikuroa, Daniel

This paper identifies how indigenous approaches can contribute to IA, presenting a framework to facilitate the integration of IK and "Western" knowledge—realizing opportunities for complementarity.

Indigenous views: Poverty and impact assessment

Mendoza, Angeles

The description of how indigenous participants in Aashukan defined poverty from the perspective of their people is used to promote an exchange of ideas on how impact assessment can be improved.

Aashukan Declaration: A guiding principle for SIA

Hanna, Philippe; Inglez de Souza, Cássio

As anthropologists and consultants, we intend to discuss the strategic role played by IA with Indigenous Peoples and its potential to contribute for the enhancement of SIA practice.

POWER GENERATION AND TRANSMISSION

Power-sector ESIA: Good practice examples and guidelines

Thursday 17 May | 11:00-12:30 | 12C

Paper Session

Chair(s): Bernt Rydgren

The presenters will share good practices in ESIA of power generation and transmission, including the development of standards and guidelines for practitioners.

equalitric procedures for indigenous values

Muir, Bruce

Modified procedures of the weighted impact interaction matrices technique are presented as a best practice for EIAs to integrate indigenous cultural values and evaluate project alternatives.

Checklist-style ESIA guidelines for hydropower

Rydgren, Bernt; Hartmann, Jörg; Locher, Helen

The guidelines address good practice on key hydropower issues, support capacity-building through the use of checklists, and integrate socio-environmental guidance with similar techno-financial input.

Energy justice in transition

Zengin, Zinnure Osman

The focus around energy transition should not be about fighting against climate change or increasing energy security but rather presenting and developing green industrial policies.

PROFESSIONAL DEVELOPMENT AND CAPACITY BUILDING IN IA

Online IA training: Experiences, lessons learned, and the future

Thursday 17 May | 16:30-18:00 | 21DEF

Paper Session

Chair(s): John Boyle

The explosion of online training capabilities over the past decade offers considerable opportunity to enhance IA training worldwide. The session will share online IA training experiences, lessons learned, plans for the future, and thoughts about what is required for effective online training.

Dramatized learning = Impactful IA training in FIs

Ormerod, Paul; Dale, John; Evans, Rob

What have social cognitive learning theory and dramatization got to do with engaging and effective online IA learning? Find out how this approach to learning is emerging in the financial institutions (FI) sector.

IAIA's online Foundation Course

Boyle, John

IAIA's online Foundation Course in the "basics" of IA was piloted in 2017. The presentation will discuss lessons learned from the pilot before the course is made widely available.

Concurrent sessions

Reflections on IA training platforms for FIs

Ormerod, Paul; Evans, Rob; Dale, John; Fothergill, Josh
Recently, major players in the financial institutions (FI) community have aimed to enhance IA-related training. The paper reviews examples of immersive dramatization in video and audio training interventions to enhance IA training.

Using organized reasoning to improve impact assessment: Building capacity

Wednesday 16 May | 15:00-16:30 | 2BH

Workshop

Chair(s): Glenn Brown

A set of tools that supports creating and writing arguments called "Organized Reasoning" was assembled for IA practitioners. Hundreds of people received training. This workshop, including video clips from participants, shares our "theory of change," our experiences in building capacity with these skills, and suggestions for others.

A systems approach to SEA capacity development

Friday 18 May | 16:30-18:00 | 21DEF

Paper Session

Chair(s): Bobbi Schijf, Anna Francis Olsson

A systems approach helps to see the bigger picture, and to decide where to focus capacity efforts in a country. The NCEA has developed such an approach for ESIA and SEA. The Sida-funded SEA training program also uses a systems approach. We outline our approaches and share application experiences.

The NCEA's systems approach: An update

van Boven, Gwen; Schijf, Bobbi

The Netherlands Commission for Environmental Assessment has been working with a systems approach for SEA ESIA capacity development. We outline this approach and share experiences with its application.

Sida's ITP on SEA: Approach and experiences

Francis Olsson, Anna; Slunge, Daniel

We introduce the capacity development approach and experiences from the Sida-financed International Training Programme on SEA, with examples from Kenya and Vietnam.

SEA framework in Kenya

Mutui, Frida

The constitutional provision for integrating environmental considerations into developmental decisions provides a legal standing within which an SEA exercise can be required and executed.

Enhancing the scoping practice for SEA in Vietnam

Vu, Chi Cong

The paper discusses and evaluates the impacts of various SEA system functions on the limited performance of scoping for SEA in Vietnam to propose plausible initiatives for enhancement.

And now the good news

Thursday 17 May | 16:30-18:00 | 22ABC

Panel Discussion/Workshop/Therapy Session

Chair(s): Jack Krohn, Angus Morrison-Saunders

Tired of hearing EIA talked down? Come and hear inspiring, therapeutic stories of why EIA is valuable—how it drives better decision-making, better environmental conditions, better policy, better results for communities—and delivers environmental justice for society. Your stories will be welcome too. Be energized by the good news!

Story-tellers will be relating episodes from their respective EIA experiences that illustrate the positive ways that EIA has added value, whether by making projects better, finding innovative solutions to entrenched problems, achieving steps forward in environmental justice or through tangential benefits such as finding and filling policy gaps.

This session will be entertaining and inspiring while providing a safe place for professional reminiscence to counteract the negative pressure that is often applied to EIA from outside the profession.

How does IA influence development proposals?

Gronow, Claire

IA produces variable and often minor improvements in the environmental protection outcomes of development proposals. Explanations are offered based on research into the process and practice of IA.

CLEAA Africa Professional Development Fellows Program

Wednesday 16 May | 15:00-16:30 | 22G

Panel Discussion

Chair(s): Peter Tarr, Dieudonne Bitondo

Africa's most promising young and mid-career environmental and social impact assessment professionals will present on their experiences from the 2017-2018 Professional Development Fellowship Program in Environmental Assessment. The award-winning program is implemented by the pan-African network Capacity Development and Linkages in Environmental Assessment.

Coordinating national and international ESIA to ensure streamlining

Friday 18 May | 14:30-16:00 | 22G

Paper Session

Chair(s): Denise Wright

Projects relying on financing from international financial institutions must meet national and international standards. This is often achieved through a national EIA and an international ESIA, which are typically not fully aligned. The objective of the session is to review good examples where these processes have been successfully coordinated.

Mainstreaming an international environmental management standard

Nel, Johan

This paper explores the evolution of the ISO 14001 environmental management system standard from being a stand-alone standard when it was first published in 1996 through the compatibility and alignment phases with other management standards.

EIA stakeholder engagement: Experience in Nigeria

Olaogun, Atanda; Salau, Ibrahim; Lawal, Adewole

Lack of structured approach for stakeholder engagement in the existing policy framework guiding EIA process has been identified as a major challenge to an effective stakeholder engagement in Nigeria.

Opportunities in subsidiarity: SIA in Australia

Marsh, Daniel

Ichthys LNG showed how subsidiarity, materiality and risk can streamline ESIA to address lenders' standards, national/state government statutes, and the rights or expectations of traditional peoples.

NBIA: Aligning local and international ESIA requirements

Wright, Denise; Holme, Brent

Streamlining the in-country regulatory EIA requirements and international ESIA lender standards to develop an acceptable comprehensive and efficient ESIA report.

Understand closure prior to open

Preeyarittipan, Punyawit; Tippayachan, Haruthai;

Wongunta, Thawatchai

Starting early with the rehabilitation master plan for Hongsa Mine Mouth Power Project (Lao) not only provided us the understanding but also faster ecosystem return as well as more alternative local livelihoods.

Eish! African World Café: What are your Big Five?

Saturday 19 May | 14:30-16:00 | Hall 2BH

Workshop

Chair(s): Michele Gilbert, Nora Gotzmann

It's the last day of the conference, you are brimming with ideas from contemplative beach walks after conference sessions and ready to head out to South Africa's big five. Before you head out on your safari, let's get together over koeksisters and coffee and identify your big five takeaways.

Hits of the 1980s: Insights from the formative years of IA

Wednesday 16 May | 15:00-16:30 | 22DEF

Debate

Chair(s): Jos Arts, Francois Retief

In this session we discuss critical lessons from the formative years of IA. Share with us what you consider to be key wisdom from IA publications in the 1980s. What were the main debates, trends, concepts, cases, professionals, and publications? What are the lessons for today's IA?

Introducing the hits of the 1980s

Arts, Jos; Retief, Francois

Critical lessons from the formative years of IA. What were the main debates, trends, concepts, cases, professionals, publications? What are lessons for today's IA?

Impact assessment and Sustainable Development Goals

Friday 18 May | 16:30-18:00 | 21G

Workshop

Chair(s): Maria Partidário, Rob Verheem

Open forum to converge discussions with IAIA members and collectively find forms to help IA professionals in effectively addressing SDGs in IA practice.

Institutional capacity = Enhanced SDG outcomes

Saturday 19 May | 14:30-16:00 | 21DEF

Paper Session

Chair(s): Josh Fothergill

The session explores the practical and operational use of competency frameworks to enhance and ascertain adequate technical impact assessment capability in organizational and national contexts. This open session aims to examine the approach to IA capacity building across international financial and development institutions, regions, and countries.

Enabling new global E&S safeguards via training

Evans, Rob; Murphy, Jo

A thought-provoking paper on the work needed to advance a global community from existing standards to a 21st century approach to E&S safeguards.

OH&S conflicts from upcoming construction projects

Roy, Saugat; McDonald, Graham

IA and planning is blinkered from actual ground realities of hardships and risks from hazardous workplace conditions during construction phase of projects in emerging economies.

Modelling off-grid electricity delivery in Nigeria

Bello, Hafiz; Diaz-Chavez, Rocio

Conceptualizing rural off-grid systems as a common pool resource and a socio-technical system existing on multiple scales can bring about sustainable institutions managing the infrastructure.

Environmental sustainability vs. economic growth

Adejumo, Oluwabunmi

This study examines the conflicting or complementary relationship that could exist between economic growth and the environment with a view to assessing the plausibility of the environmental policies in Nigeria in achieving sustainable development.

A donor view on safeguards and risk management

Carstensen, John

This presentation explores the key reasons for donors to embrace greater use of national systems for safeguarding and risk management of development assistance funded programmes.

Professional development and capacity building in IA

Wednesday 16 May | 15:00-16:30 | 12C

Workshop

Chair(s): Lone Kørnøv, Ulf Kjellerup

This session examines the role, responsibilities and competencies of an EIA project manager: What does "competent" mean, and can experts be incompetent? What is the perceived role of managers? What knowledge, abilities, and skills are perceived important to successfully fulfil the role? How are competencies developed/assured?

Capacity building for enhanced EIA competence

Evans, Rob; Fothergill, Josh; Fothergill, Jo

A multi-perspective view on how competence and expertise are developed in the IA community, drawing on UK and multi-lateral financial institutions (MFI) actions to consider how EIA competence and capacity is built.

Leadership skills in EIA project management

Marshall, Ross

Leadership skills are a necessary component of EIA project management, not only to organize other environmental disciplines but also to communicate with other project managers and the client.

Registration and certification of IA practitioners

Thursday 17 May | 14:30-16:00 | 12C

Paper Session

Chair(s): Ross Marshall, Richard Hill

Are you an IA professional? Are you competent to practice IA? Are you seeking certification?

Globally, national and institutional systems are emerging that seek to certify or accredit IA professionals recognized as "competent" to lead on IA. This session seeks to explore and review existing systems and discuss their merits.

Global trends in EIA professional recognition schemes

Fothergill, Josh; Marshall, Ross

What individual EIA recognition schemes exist globally? What trends exist in such schemes? How can we share experience and improve standards? Come along, hear about the research, and join the discussion!

Enhancing IA professionalism in South Africa

Makhudu, Snowy; Hill, Richard

The history, purpose and structure of the Environmental Assessment Practitioners Association of South Africa (EAPASA) are outlined. Once EAPASA is appointed, practitioners have 24 months to register.

Accreditation scheme to improve IA quality in Hong Kong

U, Clara; Lee, Ka Man

This paper describes the accreditation scheme of IA in Hong Kong, which aims to maintain the integrity and advance the knowledge of the environmental professionals in the region.

Developing an IA specialist certification

Wilkinson, Lachlan

This presentation discusses experience in Australia and New Zealand in developing an Impact Assessment Specialist certification.

Where did it all go wrong? An honest look at lessons learned in ESIA

Friday 18 May | 14:30-16:00 | 21G

Panel Discussion

Chair(s): Peter Moore

IAIA practitioners are often reluctant to publicly share their experiences when things have gone a bit "pear shaped" during project implementation. This session is intended to provide a "safe space" for practitioners to discuss lessons learned, and the corrective actions taken, to get things back on track.

Improved governance of biodiversity projects

Cauldwell, Andrew; Hughes, Jessica

An improved approach is presented for practical application to screen issues and more reliably achieve the desired outcomes in the implementation of biodiversity assessments.

The problem with modern goals in traditional ESIA

Coroi, Mihai

We will use examples to demonstrate incompatibilities between traditional ESIA and more recent goals such as No Net Loss or Net Gain of biodiversity.

Community perspectives on ESIA challenges

Hamze, Mohammad; Darcy, Vincent

This paper offers lessons learned for practitioners to operationalize communities' perspectives on the challenges of conducting meaningful stakeholder engagement in ESIA processes.

Was going wrong, right for this greenfield port?

O'Donnell, Nikki

A proposed greenfield coal port in the Great Barrier Reef World Heritage Area (WHA) was beset with challenges from the outset, from an unclear strategic planning mandate to sensitive biodiversity features galore.

PUBLIC PARTICIPATION

Negotiating environmental justice with stakeholders

Thursday 17 May | 11:00-12:30 | Hall 2BH

Role-playing workshop

Chair(s): Morgan Hauptfleisch

This is an Oil for Development program session

A fun and interactive role play about environmental and social justice of a controversial (fictitious) gas field development. The session simulates a public meeting and improves understanding of how impacts are perceived by different stakeholders. The session is concluded with an analysis of engagement and negotiating techniques employed.

Concurrent sessions

Practical aspects of public participation

Thursday 17 May | 16:30-18:00 | 22DEF

Workshop

Chair(s): *Tim Peirson-Smith*

A lively, facilitated fast-paced workshop discussing the merits and demerits of the latest techniques used by practitioners in public participation around the world.

Designing projects for sustainable outcomes

Steenkamp, Tasneem

Transdisciplinary design principles enable practitioners to effectively carry out projects and develop sustainable solutions, through reflexive learning and co-creation of knowledge and solutions.

RENEWABLE ENERGY

Sustainable hydropower: Best practice examples

Saturday 19 May | 11:00-12:30 | 11

Paper Session

Chair(s): *David Blaha*

Hydropower is the leading renewable electricity generation source worldwide, but is often seen as controversial by many stakeholders and high risk by many financial institutions. Hydro has made significant progress toward managing these risks and becoming more sustainable. This session focuses on international best practice in hydro development.

Managing biodiversity risks from hydropower

van Bochove, Jan-Willem; Campbell, Genevieve; Pilgrim, John; Regan, Eugenie

In this talk, we highlight frequent gaps in hydropower biodiversity risk management and recommend best practice approaches to address these issues.

Ecological flow rate in HEP projects in Turkey

Albayrak, Ali; Bayer, İsmail Raci; Turan, Volkan; Eraslan, Selman

Ecological flow rates for hydro electric power plant projects have been increased tremendously in recent years in Turkey.

Use of climate models for hydro power planning

Changula, Luwita Kanema; Jarvis, Andrew

Climate models can play an essential role in energy planning for renewables, as they tend to replicate present and past climate to some degree of accuracy.

Engagement plan for HPPs: A case study from Brazil

Pinheiro, Mariana; Almeida, Elisângela; Heliodora, Carolina Maria; Sodré, Federica Natasha; Espécie, Mariana

This paper outlines the Brazilian Energy Research Office (EPE) experience in stakeholder's engagement during a hydropower plant (HPP) environmental licensing process.

Implementing renewable energy projects within complexity

Saturday 19 May | 11:00-12:30 | 22ABC

Panel Discussion

Chair(s): *Alison McCallum*

In this session we will be reflecting on the practical challenges of bringing green technologies into social complex settings. How do we bring benefit without doing harm? Successful implementation is best supported by an open sharing of challenges and lessons learned.

Solar and wind developments in sub-Saharan Africa

Bhamidipati, Padmasai Lakshmi; Wlokas, Holle Linnea; Haselip, James

This paper attempts to investigate the utility-scale solar developments in East Africa, focusing on social inclusion, through a framework of niche transition and political economy.

Managing E&S risks in hydropower in Africa

Heather-Clark, Stuart; van den Berg, Stephan; Bungartz, Lindsey; Cochran, Alan; Ferreira, Rodrigo

This paper explores hydropower project case studies in Africa where environmental and social (E&S) risks were identified early in the project life-cycle and understanding the practical implementation of IFC Performance Standard 5, 6, 7, and 8 was of particular importance.

Doing the right thing? Resettlement challenges

Inamdar Willetts, Arundhati; Kateregga, Keziah

This paper discusses resettlement experiences from the development of renewable energy projects in East Africa, highlighting the need for flexibility in addressing social issues to overcome challenges.

Gender and land tenure

Wellmann, Gwendolyn

This paper examines the intersection between gender and land tenure, providing insights on the disadvantages women face when the land on which they live is acquired for development projects.

Land and facility ownership in the US wind industry

Jacquet, Jeffrey; Fergen, Joshua

This mixed-methods research examines how the ownership structure of wind farms affects host communities and how landownership characteristics affect the spatial distribution of wind farm development.

SOCIAL IMPACT ASSESSMENT

Economic displacement and livelihood restoration

Thursday 17 May | 14:30-16:00 | 22G

Paper Session

Chair(s): *Irge Satiroglu, Katherine Witt*

It is not uncommon that projects interfere with the livelihood activities of the local people and economically displace them. This session aims at sharing experiences on livelihood restoration and enhancement as part of project social management.

Restoring livelihoods for long-term sustainability

DeVine, Anne

The Livelihood Restoration Program focuses on restoring and improving the means of earning income of project affected persons in Lusaka, Zambia, through business development training and mentorship.

CDAP: Identifying community priorities for skills

Inamdar Willetts, Arundhati; Kateregga, Keziah

Skills development is central to enhancing the livelihoods of project communities. Here we describe an informal consultative approach to identify essential skills needs within project communities.

Quantifying the loss: Livelihood framework applied

Maurtua Konstantinidi, Alexandra

Lessons learned of a livelihood framework approach to livelihood restoration planning (LRP) and the quantification of the loss through livelihood capitals to identify adequate restoration and improvement activities.

Voluntary resettlement within the mining environment

Becker, Elize; Human, Willie; Bloemhof, Johan

Resettlement models should be used to guide the formalization of sustainability and enterprise development programs and the application thereof. The process allows for an applied science approach.

Policy and program impacts assessment

Thursday 17 May | 16:30-18:00 | 22G

Paper Session

Chair(s): *Kwadwo Adusei-Asante*

This session focuses on ideas, examples, and studies that have measured the social impacts of specific public policies and programs and the lessons learned. Discussion of the similarity or dissimilarity of the process and the lessons learned relative to the current SIA framework are welcome.

Impact assessment of peer mentoring approaches to violence prevention

Adusei-Asante, Kwadwo

Peer mentoring approaches to violence prevention among African youth in Western Australia: a preliminary impact assessment of the "Stop the Violence" program.

Seychelles leading the way: Development of an SIA framework

Aucamp, Ilse; Aucamp, San-Marie; Renaud, Diana

The process of developing a SIA framework for the Seychelles is discussed. The framework was developed in a participatory manner. Lessons learned, opportunities, and challenges are shared with the audience.

Assessing the social impacts in EIA

Liu, Yen-Chun; Yang, Chih-Kai

EPA Taiwan is now proceeding to draw up the social impact assessment criterion, which mainly assesses the migration, rights, and interests of a majority of local residents or the traditional lifestyle.

SIA and public procurement in Sweden

Longueville, Anna

This paper explores current practice of social sustainable public procurement in Sweden and how practices can be further improved with lessons learned relative to the current SIA framework.

Gender and impact assessment theoretical challenges: A case study from Ghana

Adusei-Asante, Kwadwo

We caution against "one-size-fits-all" gender approach in SIA. We advocate for context specific and particularized gendered analysis of the impacts of projects, policies, and programs.

Environmental policy and factors of resilience

Kvistad, Michele

Government power shifts can threaten to weaken or eliminate environmental policy. This research analysis reveals characteristics of environmental policy which contribute to factors of resilience.

TOOLS AND METHODS

China's EIA Process: Adapting for a sustainable future (I)

Thursday 17 May | 14:30-16:00 | Hall 2A

Panel Discussion

Chair(s): Tianwei Li, Clara U Kam Wa

This discussion explores restructuring of environmental impact assessment framework to address environmental impacts of local and regional mega infrastructure in order to safeguard the environment, integrate the need of community, and develop sustainable development strategy. Case studies from the mainland and other countries will also be demonstrated.

SEA for China to rise to new sustainability challenges

Lam, Kin Che

This paper describes the new form of SEA required to equip China to rise to her own sustainability challenges and as a leader in One Belt One Road (OBOR) regional development.

A SEA reform in green development of cities

Li, Wei; Cheng, Runhe

An improved EIA system is composed of the red line for ecological conservation, the bottom line of environmental quality security, and the upper line of natural resource utilization.

Public engagement in the EIAO System of Hong Kong

Cheung, Wai Hung Tony

The special features of the environmental impact assessment ordinance (EIAO) in Hong Kong, which is the 2-stage public consultation process for the public and the Advisory Council on the Environment (ACE) to actively participate in the EIA process.

China's EIA Process: Adapting for a sustainable future (II)

Thursday 17 May | 16:30-18:00 | Hall 2A

Panel Discussion

Chair(s): Tianwei Li, Clara U Kam Wa

This discussion explores restructuring of environmental impact assessment framework to address environmental impacts of local and regional mega infrastructure in order to safeguard the environment, integrate the need of community, and develop sustainable development strategy. Case studies from the mainland and other countries will also be demonstrated.

Public participation in EIA by ENGOs in China

Wu, Jing; Chang, I-Shin

The research is to study the political opportunity structure for environmental non-governmental organizations (ENGOs) to participate in EIA and to investigate the orientation and development of public participation (PP) under the centralized regime in China.

China's EIA policy reform on unconventional fuel

Liang, Rui; Liang, Peng

China's EIA of unconventional fuel should speed up the reform, give full play to the role of planning EIA, and speed up the formulation of pollution control standards.

Information management on the EIA approval process

Pan, Peng; Zhao, Xiaohong; Liang, Peng

This paper introduces the related improvement work and main progress on the EIA information management and puts forward the suggestions for further EIA work in China.

Diagnostic tools for country ESIA systems: An update

Thursday 17 May | 11:00-12:30 | 21DEF

Paper Session

Chair(s): Rob Verheem, Peter Tarr

Reliable diagnostic tools are needed to assess country ESIA systems. In this session we bring together different tools, share results of applications, and discuss which tool works best when.

The renewed ESIA mapping tool of the NCEA

Schijf, Bobbi

The Netherlands Commission for Environmental Assessment (NCEA) presents its new "mean and lean" version of ESIA mapping: a tool for SWOT (strengths, weaknesses, opportunities, and threats) analysis of ESIA country systems.

Africa's EA barometer

Tarr, Peter

Sharing of experience with Africa's EA barometer.

Environmental justice in IA: Case studies in guidance and practice (I)

Friday 18 May | 14:30-16:00 | 22ABC

Paper Session

Chair(s): Aaron Goldschmidt

IA guidance worldwide varies on how to address impacts related to environmental justice. Some agencies/governments are aggressive, ensuring robust analyses; other agency guidance is weak or nonexistent. Case studies are requested to explore best practices and identify mechanisms to identify opportunities to share those best practices globally.

Environmental justice in IA: Law and policy

da Cunha, Maria; Wasserman, Cheryl

This paper explores the evolution of the concept and application of environmental justice. Implications for impact assessment include consideration of alternatives, mitigation approaches, and due process.

Institutional learning vs. Resistance: 2 US EJ cases

Edelstein, Michael R.

Two cases illustrate shortcomings in U.S. environmental justice assessment and suggest improvements. One, a nuclear permitting case, revealed institutional learning. The second, a contaminated site cleanup, did not.

Constitutional provision and environmental justice

Alam, Aparajita

Discussion on implementation and enforcement of environmental law and policies and role of judiciary through the constitution which may ensure environmental justice.

Environmental restorative justice Canterbury cases

Jenkins, Bryan

Environmental restorative justice was an alternative to enforcement when operators took responsibility for infringements, and when infringements involved government agencies with common ratepayers.

Concurrent sessions

Environmental justice in IA: Case studies in guidance and practice (II)

Friday 18 May | 16:30-18:00 | 22ABC

Paper Session

Chair(s): Aaron Goldschmidt

IA guidance worldwide varies on how to address impacts related to environmental justice. Some agencies/governments are aggressive, ensuring robust analyses; other agency guidance is weak or nonexistent. Case studies are requested to explore best practices and identify mechanisms to identify opportunities to share those best practices globally.

Environmental justice lies in eyes of beholder

Mathur, Aradhna; Quintero, Juan D.

This presentation questions if environmental justice is possible and who decides that development is taking place in a just manner using examples globally from different sectors.

Environmental justice in India

Dilay, Ariane; Patel, Kirit; Diduck, Alan

This research explores the limitations in IA process and practice that trigger the involvement of environmental courts in India and how decisions of these bodies affect the wellbeing of communities.

IA, small hydro, and environmental justice in India

Diduck, Alan P.; Johnson, Richard M.; Gardner, Esther; Sinclair, A. John; Gardner, James S.; Patel, Kirit

We examine the environmental justice implications of small hydro development in the Indonesian Himalaya, including equity in distribution of risk and opportunities for participation in impact assessment.

Acid mine drainage: Is it an ownerless environment?

Tale, Sophia

The consequences of mining activities is evident in the form of acid mine drainage in the Witwatersrand. This environmental crime challenges the weight of the polluter pays principles.

Chile: Minera Candelaria and its community

Llamazales, Soledad; Baranao, Pablo

There are many ways to resolve conflicts between projects and communities. An environmental impact assessment process can be an opportunity to negotiate, avoiding legal actions to achieve justice.

Independent panels for helping address environmental challenges

Friday 18 May | 11:00-12:30 | 22ABC

Panel Discussion

Chair(s): Stephen Edwards, Rachel Asante-Owusu

Independent panels and advisory committees are medium-to-long-term processes that involve experts who provide scientific and technical advice on a conservation or natural resource management issue, established to help understand, propose recommendations for, and monitor, projects with challenging issues and impacts on biodiversity and conservation.

Introducing the panel process to Gamsberg operation

Asante-Owusu, Rachel; Edwards, Steve

Demonstrating how lessons learned from previous IUCN panel processes are being used to form a panel of experts to help ensure No Net Loss of the unique environment of the Gamsberg (South Africa) operation.

An independent panel for a biodiversity offset

Cannon, Paul; Livingstone, Suzanne; Armstrong, Glen

A review of the role, function, and utility of an independent advisory panel to support the design and implementation of a biodiversity offset programme for the Mako Gold Project, Senegal.

Lessons from 10+ years of the Rio Tinto QMM

Gaylord, Lisa

Sharing lessons learned from the RTQMM Biodiversity Committee and describing the proposed way forward for a similar independent advisory effort.

Uganda Biodiversity and Livelihoods

Advisory Committee

Hagemeijer, Ward; Victurine, Ray; Brett, Rob; Le Bel, Sebastien; Namara, Agrippinah; Muhweezi, Alex; Esteves, Ana Maria

The Albertine Graben independent Biodiversity & Livelihoods Advisory Committee (2013) advises Total, Tullow, and CNOOC for both the upstream oil projects and the East African crude oil export pipeline.

Rio Doce Panel: Independent science-based perspective

Sanchez, Luis; Kakabase, Yolanda; Barbosa, Keith;

Alonso, Luiza; Barbosa, Francisco; Roeser, Hubert

An independent panel was established by IUCN to advise on the restoration of ecosystems and livelihoods affected by a mine dam failure in Brazil. Disaster impacts and the panel's role will be presented.

Impact assessment: Its role in triggering conflict and using mediation

Wednesday 16 May | 15:00-16:30 | 22ABC

Panel Discussion

Chair(s): Gina Barbieri, Alison McCallum

This session will focus on answering questions about conflicts associated with impact assessment and development projects. Using practical case examples, the panel will discuss mediation tools used to avoid and address conflict situations associated with environmental and social justice, project development, and the impact assessment process.

Panelists

Adrea Repetto, Dispute Resolution Specialist, CAO, will describe an actual conflict relating to IA and the tools used to overcome the conflict.

Fatoumata Binta Keita, International Finance Corporation (IFC), Infrastructure and Natural Resources Advisory, will share innovative approaches on youth engagement in a fragile environment.

Stuart Heather-Clark, Sustainability Consultant, will share experiences of conducting IAs and the conflicts that can arise.

SPECIAL TO IAIA

EIA Follow-up best practice principles

Saturday 19 May | 14:30-16:00 | 12D

Roundtable

Chair(s): Angus Morrison-Saunders, Jos Arts, Ross Marshall

It is time that the 2007 IAIA best practice principles for EIA follow-up are reviewed and updated. Come along to this workshop to contribute to the revision process led by Angus Morrison-Saunders, Jos Arts, and Ross Marshall. All ideas and contributions welcome!

Meet the editor

Thursday 17 May | 16:30-18:00 | 12D

Workshop

Chair(s): Thomas Fischer

Are you considering writing an article or professional practice paper on impact assessment but aren't sure where to start? The editor and managers of IAIA's journal, *Impact Assessment and Project Appraisal*, will present ways to write a good article and get it published. Bring your questions and ideas for articles or guest issues.

Posters

Agriculture, forestry, and fisheries

Knowledge brokerage in fisheries management

Partidário, Maria; Cegonho, Rute; Monteiro, Margarida; Barros, Margarida

The bottom-up participatory approach of ConFish Project is presented to share lessons on positive actions for knowledge brokerage and transform fishery community practices towards a sustainable change.

Biodiversity and ecology and ecosystem services

Biodiversity-rich connection of two continents

Arisoy, Defne

TANAP, a mega pipeline project, connects two continents without sacrificing biodiversity and enhancing in-country ecological database with its baseline studies, action plan, and offset strategy.

Landscape analysis in EIA: A biodiversity ally?

Rehbein, Christina; Brklacich, Mike; Mitchell, Scott

Study results suggest gaps where landscape analysis could enhance biodiversity dimensions of EIA. We introduce a simulation model to explore how this might inform decisions and impact biodiversity.

An innovative evaluation of ecosystem services

Rodrigues, Patricia; Monteiro, Barbara; Oliveira, Nuno

An innovative approach to the evaluation of ecosystem services was produced, based on the identification of ecosystem services per habitats and the classification of its importance.

Analysis of ecological hotspot area

Ryu, Jieun; Lee, Dong-Kun; Jeong, Seong Woo

This study not only considered the health and diversity of the ecosystem but also optimized the evaluation results through the mechanical learning method.

River flow and nutrient changes using periphyton

Singh, Samiksha

Periphyton, due to its susceptibility to changes in flow regimes and nutrient composition, is a good indicator of river health.

Climate change

Urban heat wave vulnerability for climate change

Je, Minhee; Jung, Seunghyun; Kim, Hyomin

This study aims to analyze vulnerable regions of thermal environments in the present and future, thereby analyzing and discussing the main occurrence factors of classified thermal environments by region.

Disasters and conflicts

Disaster preparedness and response

Garbarran, Hari

Humans In Crisis volunteers trained in emergency response practices make a positive impact to 2017 hurricanes in the USA.

Education and the IA profession

Compendium: National EIA

Professional Recognition

Fothergill, Josh

The poster presents the findings of an IAIA research grant-funded study exploring national recognition schemes for individual EIA practitioners.

The circular economy joins sustainability teaching

João, Elsa

It is fundamental that teaching of sustainability includes leading issues in circular economy. Survey results of 100+ participants on a new circular economy course (Strathclyde University) are presented.

Environmental education for primary school

Lima, Júlia

Environmental education, critical thinking, environmental attitude, extra-curricular activities, value priorities, large-scale survey, interests in science topics, influence.

EIA

EIA implementations on IA projects in Turkey

Albayrak, Ali; Bayer, İsmail Raci; Bozkır, Bahadır; Eraslan, Selman

EU supports Turkey for environmental infrastructure development. The EIA process for those investments should be re-organized and EU Commission decisions should be adopted to the Turkish EIA system.

EA: A sustainability steering wheel

Azong, Matilda; Chamane, Sindiso Charlotte; Dikeme, Dikgang, Otsile Niel

This poster presents some of the experiences of CLEAA's Professional Development Fellowship Program participants, advancing the use of environmental assessment best practices in sub-Saharan Africa.

Atmospheric pollution by particulate matter

Pereira Santos, Deborah; Daniel Ferreira, Flávio

Atmospheric pollution by particulate matter: temporal and spatial variation in the state of Minas Gerais, Brazil.

Issue for EIA on management of soil in Korea

Yang, Kyung; Shin, Kyung-Hee; Kim, Kyoung-Ho

The problems and its solutions of EIA on soil environment, especially for soil contamination management in Republic of Korea were suggested.

Energy

Reference matrix and qualification of EIA

Araujo, Felipe; Mello, Gisela; Ramos, Alysson; Martins, Lilian

Elaboration of a cause and effect reference matrix to improve EIA of power lines, through the standardization and the settlement of the main issues and impacts that need to be addressed.

Is bird conservation a barrier to wind energy?

Aversa, Izabella; Polizel, Juliana; Montaña, Marcelo

Identification of alternative sites to prevent trade-offs between wind energy expansion and birdlife conservation: case study in Brazil.

EIA in Korea's onshore wind power project

Lee, Young-Joon; Chun, Dong Jun; Lee, Moungh Jin; Park, Jong-Yoon

This study suggests solutions to minimize the conflict of an excellent wind resource distribution area with a nature conservation area for expansion of an onshore wind power project in Korea.

Estimating potential of floating solar power

Park, Jong-Yoon; Lee, Young-Joon; Chun, Dong-Jun; Lee, Moungh-Jin

A hierarchical approach for estimating the potential of floating solar power on agricultural reservoirs by considering technical, environmental, and social factors.

Offshore wind farm in Korean southwestern coastal area

Seo, Jinsung; Maeng, Junho; Park, Seonyoung

It is expected to provide environmental impact assessment and ocean safety guidelines for the establishment of offshore wind farms suitable for domestic waters by providing environmental information.

Environmental justice

TANAP, "Silk Road of Pipelines," serving justice

Erdem, Fatih

TANAP, the "Silk Road of Pipelines," serving environmental and social justice.

Currencies for transition and sustainability

van Staden, Francini

A theoretical call to the risk of social-ecological justice remaining unresolved based on transition movements that are founded on economic orthodoxy and therefore, the need for complementary ideologies.

Governance

IA of a one-stop-shop for environmental permits

Jantunen, Jorma

The poster presents IA process and the main results of a legislative proposal for coordination of environmental permitting procedures (one-stop-shop) in Finland.

Health

Evaluation of impacts of the transshipment plant

Almeida, Eliane; Matias, Camila; Gondim, Carolina; Domenico, Filipo; Moura, Thiago

The improper disposal of solid waste is a big problem in Brazil and is responsible for impacts on the environment that affect public health of the population.

Integrated environmental assessment of pre-salt projects

Almeida, Eliane; Penido, Fabricio

The integrated environmental assessment methodology proposed was elaborated based on the analysis of the environmental impacts arising from the environmental impact assessment of pre-salt projects.

Wetlands as an alternative to basic sanitation

Lima, Júlia

It is necessary to build treatment systems suitable to the Brazilian reality; that is, low operating cost, maintenance, and high efficiency to address poor sanitation and health conditions.

Alternative method to provide water for human need

Lima, Júlia

The problem of precarious sanitary conditions requires treatment systems appropriate to the Brazilian reality: low operating costs, easy maintenance, and high efficiency.

Air quality EA for industrial complex in Korea

Moon, Nankyung; Ha, Jongsik; Seo, Jihyun

We evaluated the impact of the major industrial complexes such as petrochemical, refining, and steel complex and estimated the number of premature deaths to investigate the impact on the public health.

Determinants of health: Challenges of project level

Viliani, Francesca

HIA of projects encounter limitations when the broader context and developmental issues are not considered. Health therefore needs to be better included at the policy and planning phases.

Public participation

Bus rapid transit Rea-Vaya: "We are Moving" the public transport system together with communities

Hlomuka, Sibongile

Promoting effective and efficient public transport and non-motorized transport system to the communities for the communities through community participation process in Johannesburg, South Africa.

SEA

SEA outcomes applied to Scottish waste strategies

João, Elsa; Celestino, Joyce; Montano, Marcelo

Tiering and outcomes incorporation from environmental assessment at strategic levels of decision: lessons from the Scottish SEA system applied to waste management strategies.

Tools and methods

A protocol for EIS: A tool for managers

Armanini Tagliani, Paulo Roberto

This work presents a free digital platform developed by the Coastal Management Laboratory of the Rio Grande Federal University (Brazil) to facilitate EIS analysis.

Urban heat map making using network-based observations

Jung, Seunghyun

This study enabled regional classification based on heat island characteristics to contribute to establishment of measures for each regional classification.

EIA large-scale engagement: 2 million people

Kelly, Paige Diana

Illustrating the methodology of a large-scale engagement and outcomes of the public participation process regarding a telecommunication project impacting 2 million people in Namibia.

Crime science improves biodiversity goals in EIAs

Kerr-Smith, Catherine

Focusing on the EIA decision-making process to protect biodiversity and ecosystems, crime science uses empirical evidence to determine why "crime events" such as legislative "rule-breaking" happen.

Estimation of diesel vehicle emissions in HIA

Kim, Yumi; Kim, Mina

Current status and problems of air pollutant emission estimation of diesel vehicles in EIA and HIA were investigated and then an improved method of emission factor application was suggested.

Quantifying the loss: Livelihood framework applied

Maurtua Konstantinidi, Alexandra

Livelihood framework approach to LRP planning: the quantification of loss through livelihood capitals to identify adequate restoration and improvement activities.

Empowered through play

Oosthuizen, Sian

Empowering society to actively engage in decision making can be achieved by playing games that simulate reality, enabling stakeholders to generate understanding, test scenarios, and build knowledge.

Using visual language to manage environmental risk

Sanderson, Danielle

Communicating sustainable development and environmental resilience to those outside this specialist realm requires branching out of purely scientific explanation and into that of graphics and media.

The Mauri Model: Indigenous tool for IA

Taute, Dylan

This poster presents a review of the Mauri Model and presents its application as a tool to assess the potential impacts of further geothermal development in New Zealand.

An online scoping tool using vulnerability maps

Van Ghelue, Pascal; Timmermans, Veerle; van Straaten, Dick

In Flanders, a more effective scoping online system will be created. Vulnerability maps and sub-activities of the proposed activity will be used to determine potential environmental impacts.

Engagement: Showing compliance with standards

Westbury, Mark

This poster provides a model for recording stakeholder engagement in a way that helps to demonstrate alignment with international standards and to provide robust evidence to support the ESDD process.

Analysis in environmental geo-informatics with UAV

Zhu, Yongyan

The usability analysis of the fourth industrial revolution technologies in environmental geo-informatics with UAV.

Exhibits | Annual General Meeting

EXHIBITORS



Bioinsight • Biota • DEA

EAPASA • EIMS • Environmental Accord Ltd

eThekwini Municipality • IAIA19

Juta • LIMETOOLS • NCEA

SRK Consulting • Tetra Tech

The Cadmus Group

TRIPLO4 Sustainable Solutions (Pty) Ltd • Skate Ubuntu

AFFILIATE, BRANCH, AND ASSOCIATED ORGANIZATION POSTERS

Check out the posters to learn about these groups and their latest activities!

- **Korea:** Korean Society of Environmental Impact Assessment (KSEIA)
- **Mozambique:** Mozambican Association (AMAIA)
- **Environmental Institute of Australia & New Zealand** (EIANZ)
- **Nigeria:** Association for Environmental Impact Assessment of Nigeria (AEIAN)
- **Portugal:** Associação Portuguesa de Avaliação de Impactes (APAI)
- **Washington (DC) Area Branch**
- **Zambia:** Impact Assessment Association Zambia (IAAZ)

Tables are provided at the entrance to Hall 2CDE for IAIA members to display information, distribute conference papers, or announce/distribute non-commercial items. Delegates must attend the conference to display materials. IAIA reserves the right to remove documents or materials without notice.

Only official exhibitor posters and/or technical posters approved by the Program Committee during the review process may be displayed.

ANNUAL GENERAL MEETING

Friday 18 May | 12:40-13:30 | Meeting Room 11

This is the annual business meeting of the Association and a time to recognize one of IAIA's outstanding members.

All conference participants are encouraged to attend, learn more about IAIA's operations, what we accomplished over the past year, and what lies ahead for the next. In addition, come celebrate one of IAIA's finest as we give out the Lifetime Achievement Award to Iara Verocai.

Agenda

1. Welcome, introductions, confirmation of the 2017 AGM Minutes
2. Report from the President, Marla Orenstein
3. Report from the Executive Director, Jill Baker
4. IAIA's Financial Report from the Treasurer, Morgan Hauptfleisch
5. Presentation of the IAIA Lifetime Achievement Award and address by the recipient, Iara Verocai
6. Q & A from members

Notes

STUDENTS AND YOUNG PROFESSIONALS (SYP) WORKSHOP

Wednesday 16 May | 08:00-11:45 | 21ABC

To foster the integration of students and young professionals in IAIA conferences, the Students and Young Professionals (SYP) Section, together with the Headquarters and the IAIA18 Program Committee, have organized a half-day "Student and Young Professionals Workshop" as a pre-event of IAIA18.

PROGRAM

07:45 - 08:00

Registration

08:00 – 08:10

Workshop opening. Marla Orenstein (IAIA President) will do the honors of welcoming the SYP Section members to the workshop.

08:10 – 09:30

Keynote speakers presentations. Four invited speakers from different sectors present their experience and share their points of view about career issues related to IA career development.

- **Luis E. Montañez Cartaxo** (Consultancy sector)
- **Ntsako Baloyi** (Industry sector)
- **Kwadwo Adusei-Asante** (Academic sector)
- To be confirmed (Public sector)

09:30 – 09:45

Presentation of an EIA training course by John Boyle

09:45 – 10:00

Coffee break

10:00 – 10:30

Elevator-pitch presentations by SYP. Five SYP members (pre-chosen volunteers) will present what they are working on (4 minutes each) and all the participants of the workshop will be able to benefit from the experience of others.

10:30 – 11:30

Speed mentoring. Just like speed dating, the SYP will introduce himself/herself to an experienced member of the IAIA (the mentor) and have 3 minutes for an exchange. At the expiration of this 3 minutes, the SYP will move to meet the next mentor. The objective of this speed mentoring is to meet new people and develop your network.

11:30 – 11:45

Close of workshop. Dr. Ilse Aucamp, IAIA18 Program Committee

Help identify outstanding presentations!

Based on delegates' feedback, select presenters will be invited to record their presentations for online viewing.

Please drop off your ballot at the registration desk by 13:30 on Saturday, 19 May, or complete the session's "Presentation Survey" in the mobile app.

OUTSTANDING PRESENTATIONS

Submitted by

Presenter's name

Presentation title

Session Date	Session Time			
Wednesday 16 May				15:30
Thursday 17 May	09:00	11:00	14:30	16:30
Friday 18 May	09:00	11:00	14:30	16:30
Saturday 19 May	09:00	11:00	14:30	

What makes this presentation outstanding?

.....

Presenter's name

Presentation title

Session Date	Session Time			
Wednesday 16 May				15:30
Thursday 17 May	09:00	11:00	14:30	16:30
Friday 18 May	09:00	11:00	14:30	16:30
Saturday 19 May	09:00	11:00	14:30	

What makes this presentation outstanding?

.....

Presenter's name

Presentation title

Session Date	Session Time			
Wednesday 16 May				15:30
Thursday 17 May	09:00	11:00	14:30	16:30
Friday 18 May	09:00	11:00	14:30	16:30
Saturday 19 May	09:00	11:00	14:30	

What makes this presentation outstanding?

.....

SOUTH AFRICA'S DEPARTMENT OF ENVIRONMENTAL AFFAIRS

The Constitution of the Republic of South Africa empowers us as a sector and the Department of Environmental Affairs continue to endeavour for the full realisation of the right to an environment that is not harmful to the health and well-being of South Africans and all those who live in our country. As the sector and the Department, we aim to radically transform our approach to environmental protection, while also balancing it with socio-economic development – crucial pillars on which sustainable development rests. As a nation we adopted the National Development Plan, which maps out the vision of the country for the 20 years ahead. In the environment sector, we will implement related aspects of the priority areas that deal with environmental protection and sustainable development.

Also in our quest to achieve the Sustainable Development Goals, we continue to promote various initiatives that galvanise unprecedented efforts to make South Africa a better country for all who live in it. The department therefore aims to provide leadership in environmental management, utilisation, conservation and protection of ecological infrastructure.

Mandate and core business

The Department of Environmental Affairs is mandated to give effect to the right of citizens to an environment that is not harmful to their health or wellbeing, and to have the environment protected for the benefit of present and future generations. To this end, the department provides leadership in environmental management, conservation and protection towards sustainability for the benefit of South Africans and the global community.

Vision

A prosperous and equitable society living in harmony with our natural resources.

Mission

Providing leadership in environmental management, conservation and protection towards sustainability for the benefit of South Africans and the global community.

Values

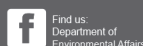
Driven by our Passion as custodians and ambassadors of the environment we have to be Proactive and foster innovative thinking and solutions to environmental management premised on a People-centric approach that recognises the centrality of Batho Pele, for it is when we put our people first that we will serve with Integrity, an important ingredient in a high Performance driven organisation such as ours.



DESIGNED BY DEA COMMS

Website: www.environment.gov.za

Call Centre: 086 111 2468



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA



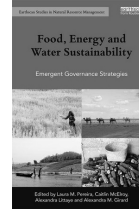
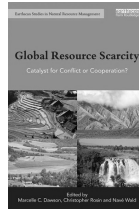
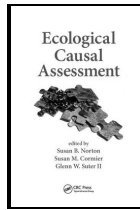
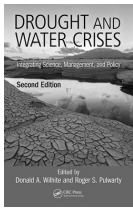


DURBAN SOUTH AFRICA

Durban is a natural paradise known for its gorgeous coastline of sun-kissed beaches and subtropical climate, situated on the eastern seaboard of Africa. The City is built around one of the busiest ports in Africa and our people are our pride. The city focuses on providing visitors with a unique set of experiences that go beyond the beach and into the realm of Durban's diverse culture, urban lifestyle and scenic diversity. Durban is a gateway to the Kingdom of the Zulus, which boasts world heritage sites, uKhahlamba Drakensburg Mountain ranges and iSimangiliso Wetland Park and numerous unique game parks within 3 hours' drive. The City of Durban is an elegant, mature and ambitious city. It is a trendsetter in offering great lifestyle, speckled with adventure activities, blessed with natural beauty and is an astonishingly liveable city. Whether you are here as a business delegate or a leisure traveller, there is a warm African flavour that will capture your heart forever.

www.durban.gov.za

New Books from Routledge



Visit the Routledge stand for 20% off all books on display, plus free journal sample copies and access offers!

Explore our books catalogue at www.routledge.com/sustainability and browse our journals portfolio at www.tandfonline.com



IAIA19

BRISBANE AUSTRALIA

EVOLUTION OR Revolution: Where next for impact assessment?

29 April-2 May 2019

April 2020

Seville, Spain

IAIA20

SEVILLE • SPAIN
Smartening Impact Assessment

Find that perfect fit.

Your online employment resource for jobs and candidates in the field of impact assessment.

IAIA Career Central

Where do you go to find the best jobs and most qualified candidates in Impact Assessment? The International Association for Impact Assessment (IAIA) has created **IAIA Career Central** to be your resource for making online employment connections in the field.

<h3>Job Seeker Benefits</h3> <ul style="list-style-type: none"> • Services are FREE! • Online job search and application. • Confidential resume posting. • Save jobs and apply when ready. • Email notification whenever posted jobs match your search criteria. 	<h3>Employer Benefits</h3> <ul style="list-style-type: none"> • Targeted talent pool – reach a focused audience of qualified professionals. • Easy online job posting and management. • Resume search included with job posting. • Email notification whenever job seekers match your requirements.
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Post your job or resume at <http://jobboard.iaia.org>.

1330 23RD STREET SOUTH | SUITE C | FARGO, ND 58103-3705 USA
PHONE +1 701.297.7908 | FAX +1 701.297.7817

Environmental Management in South Africa

3RD EDITION

ND King, HA Strydom and FP Retief (eds)

Win a BOOK!

Drop your business card at the Juta booth for a chance to win this book. Drawings to be held during the book launch and at the closing plenary.

Join US!

Thursday, 17 May
12h40pm
Hall 2A

Must be present to win.



ERM is a leading global provider of environmental, health, safety, risk, social and sustainability related services.

Impact Assessment

ERM's goal is to enable our clients to plan, build, operate, and retire their projects sustainably, on schedule, and on budget

Key Impact Assessment Services:

- Project and Regulatory Permitting/ Approvals
- Environmental and Social Impact Assessment
- Stakeholder Engagement
- Resettlement Planning and Implementation
- Social Strategy Development
- Equator Principles and IFC Performance Standards Compliance

www.erm.com



The business of sustainability



A lot happens between pressing a button and printing your document.

At Eskom, we perform over 6900 vital processes to generate, transmit and distribute the energy that powers your office printer. It's something we do with passion because it's so much more than just electricity. It makes your business tick. That's why we'll always do whatever it takes to make sure you have power at your fingertips every time you press a button. Good luck with your meeting!

Eskom | Powering your world

Eskom Holdings SOC Ltd Reg No 2002/015527/30



Impact Assessment One stop, full service

Royal HaskoningDHV is an independent, international engineering and project management consultancy with over 135 years of experience in sustainable development and innovation.

We are frontrunners in Impact Assessment and digital interactive reporting (iReport), making reporting more transparent, concise and accessible.

We look forward to meeting you at IAIA18.

royalhaskoningdhv.com



**Want to ask a question of all IAIA members?
Get Section members' opinions on a topic?
Continue a discussion started at a conference to
involve those who couldn't attend the conference?**

Just log in at <http://iaiaconnect.iaia.org>, choose a group, and post your question.

Messages and replies on IAIAConnect are archived and accessible, much like an electronic bulletin board. Members can upload resources, post event notices, add a profile picture, and search for and view each others' profiles.

Activity on the site can be sent to members via e-mail notifications with either a daily or weekly "digest."

If you have any questions, please contact Bridget John (bridget@iaia.org) or download two resource documents posted at www.iaia.org/iaia-connect.php: 1) Frequently Asked Questions and 2) a quick reference guide to the navigation system used in Connect.



INTERESTED IN AN IMPACT ASSESSMENT FELLOWSHIP IN AFRICA?

INTERESTED IN SUPPORTING A RISING STAR IN IMPACT ASSESSMENT?



Africa's award-winning Professional Development Fellowship Program in Impact Assessment (**PD Fellows Program**) provides practical training and mentorship to the continent's most promising young and mid-career environmental and social impact assessment and management professionals. Implemented by the pan-African network Capacity Development and Linkages for Environmental Assessment in Africa (CLEAA), the program has been supported by multiple international donors, including USAID, the World Bank, and Sida.

Program fellows learn by doing, participating in a professional impact assessment team, applied training and/or appropriately-tailored engagement for a period of 2 to 6 months to gain practical impact assessment experience in specialized fields of their own choosing. The experience is also intended to connect fellows firmly to the impact assessment professional community, including travel to and participation in a relevant impact assessment conference such as IAIA 2018.

For the 2017–2018 program cycle, USAID has generously provided support to reboot the program by funding the first fellows class since 2009, as well as outreach and planning to place the program on a sustainable, multi-donor funding basis under African leadership. Fellows from this year's program will present on their experiences and lessons learned at a panel discussion session during this year's IAIA.



CLEAA gratefully acknowledges core support from USAID for the 2017–2018 Fellows class.

The PD Fellows Program requires engagement from the IA community to sustain its mission—supporting sustainable development in Africa by supporting the professional development of the most promising young African IA professionals:

- African and international businesses, developers, banks, foundations, philanthropists, and governments are urged to support this highly successful program to strengthen the ranks of highly qualified African IA specialists.
- Fellowship candidates, host entities able to offer practicum placements, and potentially interested private-sector sponsors/hosts and international donors for the next year's program cycle are urgently sought!

To learn more at IAIA 2018, please:

Attend the PD Fellows conference session.

Attend the CLEAA-Africa interests side meeting (to be announced).

Talk with CLEAA Trustees:

Prof. Dieudonné Bitondo, Secrétaire Exécutif
Secrétariat pour l'Évaluation Environnementale en Afrique Centrale (SEEAC)

Email: info@seeaonline.org

Dr. Peter Tarr, Executive Director
Southern African Institute for Environmental Assessment (SAIEA)

Email: peter.tarr@saiea.com

Index of presenting authors and panelists

A

Abrusci, Elena 32
Adejumo, Oluwabunmi 35
Adusei-Asante, Kwadwo 37
Alam, Aparajita 37
Albayrak, Ali 25, 36, 40
Alberts, Reece 20
Almeida, Eliane 41
Almeida, Eliane Silva Ferreira 22
Alonge, John 22
Amoruso, Gloria 23
Annandale, David 19
Appendino, Federica 31
Appleby, Gordon 17
Araujo, Felipe 40
Araya, Gino 20, 25
Arisoy, Defne 19, 40
Armanini Tagliani, Paulo Roberto 41
Arts, Jos 18, 19, 34
Asante-Owusu, Rachel 29, 38
Assavarak, Passanan 24
Aucamp, Ilse 37
Aversa, Izabella 40
Azong, Matilda 40

B

Bach, Erica 16
Bahindwa, Abigail 27
Bakia, Mbianyor 32
Bansal, Tulika 27
Barlas, Dilek 16
Bassa, Humayrah 18
Becker, Elize 36
Bedeaux, Dietske 31, 32
Bella, Aimee 27
Bello, Hafiz 35
Bergamini, Kay 25
Bettencourt, Pedro 22, 30
Bhamidipati, Padmasai Lakshmi 36
Bice, Sara 25
Binta Keita, Fatoumata 38
Blaha, David 17
Boltemo Edholm, Jenny 22, 30
Bolton, Robin 30
Booth, Pieter 22
Borges, Antônio 28, 29
Boyle, John 33
Bristol-Alagbariya, Edward 22
Brooks, Sharon 27, 29

Brown, Cate 17
Brown, Glenn 21
Brownlie, Susie 16, 28
Buhanga, Edgar 16, 28
Bullen, Victor 19

C

Campbell, Genevieve 16, 30
Cannon, Paul 27, 38
Carrera, Juan Pablo 29
Carstensen, John 35
Cauldwell, Andrew 16, 35
Cave, Ben 33
Chanchitpricha, Chaunjit 30
Chande, Milika Mimi 27
Changula, Luwita Kanema 36
Cheung, Wai Hung Tony 26, 37
Chung, Hye In 29
Coroi, Mihai 28, 35
Costa, Hugo M. R. 29
Costa, Nives 19
Courcelles, Réal 33
Cousins, Neil 27
Coutinho, Miguel 19

D

da Cunha, Maria 20, 37
da Cunha, Maria; 20
Dalal-Clayton, Barry 19
Damgaard 24
Davis, Mark 29
De Beer, Jessica 25
De la Cruz-Novey, Alicia 26
Derkum, Sonja 16
DeVine, Anne 36
DeWinter-Schmitt, Rebecca 24
Diantini, Alberto 30
Diduck, Alan P. 21, 38
Diga, Kathleen 22
Dilay, Ariane 38
Ditlhale, Ntswaki 22
Doelle, Meinhard 21
du Plessis, Anél 16, 18
du Plessis, Willemien 16, 24

E

Edelstein, Michael R. 37
Ehrman, Cary 22
Eijssen, Paul 31
Erdem, Fatih 23, 40

Ergeneman, Candan 20
Escalante, Ariana 23
Evans, Rob 33, 34, 35

F

Fa'au, Tūmanako 33
Factor, Gabriela 24
Faith-Ell, Charlotta 19, 21
Faty, Babalwa 25
Fischer, Thomas 20
Fonseca, Alberto 26, 30
Fothergill, Josh 33, 34, 35, 40
Francis Olsson, Anna 34
Francis, Patrick 19, 24

G

Gallardo, Amarilis 20, 23
Garbharran, Hari 40
Gaylord, Lisa 27, 38
Geißler, Gesa 23
Gilles, Isabelle 24
Gordhan, Bharat 18
Gosney, Gwen 19
Gouws, Pierre 19
Green, Stewart 16
Griffiths, Victoria 27
Gronow, Claire 34
Grossman, Dennis 29
Gwemende, Titus 24

H

Hagemeijer, Ward 38
Hamze, Mohammad 35
Hanna, Philippe 20, 33
Hardon, Anne 19, 31
Hart, Andrew 20
Hart, Timothy 24
Hauptfleisch, Morgan 17
Hayashi, Kiichiro 29
Hayes, Samuel 31
Heather-Clark, Stuart 23, 36, 38
Hemphill, Cassandra J. 25
Hlomuka, Sibongile 41
Hoffmann, Bjorn 18
Holland, Twyla 23, 27
Howard, Pippa 20, 22, 23, 27, 29
Hughes, Jessica 29
Hussain, Thilmeeza 20
Hwang, Sang-il 32

I

Inamdar Willetts 36
Ip, Tsz Ying 26

J

Jacob, Céline 27
Jacquet, Jeffrey 36
Jantunen, Jorma 41
Je, Minhee 30, 40
Jenkins, Bryan 20, 37
João, Elsa 40, 41
Jo, Eugene 31
Jones, Julia P. G. 27
Joyce, Susan 24
Jung, Seunghyu 41

K

Kalle, Heikki 19
Kamijo, Tetsuya 17, 25
Kaniki, Christopher 18
Kantoe, Peter 16
Kellerman, Lizande 19
Kelly, Charles 32
Kelly, Paige Diana 26, 41
Kennedy, Bill 16
Kerr-Smith, Catherine 41
Kershaw, Pamela 16
Kim, Yumi 41
King, Nicholas 29
King, Virginia 28
Kolhoff, Arend 19
Kominek, Byron 22
Kor, Laura 28
Koroma, Ranita 22, 30
Kvistad, Michele 37

L

Lam, Kin Che 37
Lawrence, Andrew 26
Leche, Juliet 22
Ledec, George 18
Lee, Ka Man; U 17, 26
Lee, Sangyun 26
Lee, Young-Joon 40
Lee, Youngsoo 30
Legoale, Tshiamo 27
Lehman, Martine 20
Liang, Rui 37
Lima, Júlia 40, 41

Index of presenting authors and panelists

Liu, Yen-Chun 37

Liversage, Nicola 18

Li, Wei 37

Llamazales, Soledad 38

Longueville, Anna 19, 37

Loots, Josua 23

Lopez, Luis 21

Loth-Bown, Christine 21

Lung, William 26

Lyons, Anna 20, 22

M

Makhudu, Snowy 35

Mallawatantri, Ananda 32

Manuel, Jeffrey 28, 29

Marquez Mees, Victoria 16

Marshall, Ross 35

Marsh, Daniel 26, 34

Martin, Erik 17

Martins Dias, Luis 31

Mathur, Aradhna 38

Mathur, Vinod 28

Maurtua Konstantinidi, Alexandra 36, 41

McCarfetty, James 28

McClain-Nhlapo, Charlotte

McLauchlin, Paul 24

Mello, Gisela 26, 40

Mendoza, Angeles 33

Meyer, Theunis 26

Mishra, Pradeep 26

Mkutu, Kennedy 23

Mmom, Prince Chinedu 12

Molelu, Obakeng 26

Montaña, Marcelo 21, 40

Moon, Nankyung 41

Morgan, Te Kipa Kipa Brian 25

Moses, Malcolm 28

Mottee, Lara 18

Muhammad, Usman 30

Muir, Bruce 17, 33

Mullins, Greg 27

Munday, Jane 25, 26

Murayama, Takehiko 25

Mutui, Frida 34

Mwanundu, Sheila 19

N

Namara, Justine 16

Nel, Johan 34

Nelson, Peter 19, 32

Newman, Kate 28

Ngwenyama, David 25, 28

Ng Yeun Ching, Queenie 26

Niner, Holly 27

Nkerbu, Presley 25

O

O'Donnell, Nikki 35

Ogwang, Tom 18

Ojile, Meshach 18, 22

Olaogun, Atanda 30, 34

Olorundami, Fayokemi 22

Oosthuizen, Sian 41

Orenstein, Marla 17, 31

Ormerod, Paul 33, 34

P

Pan, Peng 37

Park, Douglas 18

Park, Jong-Yoon 40

Partidário, Maria 19, 40

Patiri, Victor 28

Patiwael, Patrick 31

Pedersen, Rasmus 20

Peltonen, Lasse 32

Pereira Santos, Deborah 40

Perez, Cristian 28

Pinheiro, Mariana 17

Polglase, Christopher 31

Pope, Jenny 21

Preeyarittipan, Punyawit 34

Puspitasari, Astrid 19

Pyatt, Nicholas 18

Q

Quétier, Fabien 28, 29

Quispe-Zúñiga, Melissa Roxana 25

R

Rahill, Bilal 33

Rainey, Hugo 29, 30

Raissiyan, Behzad 18

Rajvanshi, Asha 28

Rantlo, John 16

Ratsoenyane, Lerato 20

Repetto, Adrea 38

Rehbein, Christina 40

Reub, Greg 28

Rifkin, Will 20

Roca, Roberto 28, 30

Rodrigues, Patricia 40

Rodríguez, Edna 30, 31

Ross, Bill 21

Roy, Saugat 35

Rydgren, Bernt 33

Ryu, Jieun 29, 40

S

Saarela, Sanna-Riikka 26

Salau, Ibrahim 30

Salcito, Kendyl 23

Sanchez, Luis 21, 38

Sanda, Ahmed 20

Sanderson, Danielle 20, 41

Schijf, Bobbi 34, 37

Schreiner, Greg 23

Scott-Brown, Miles 20, 36

Seekamp, Erin 30, 31

Seo, Jinsung 40

Shale, Thato 19, 20

Shippey, Karen 18

Sileryte, Rusne 31

Sinclair, A. John 21

Singh, Samiksha 40

Skolnik, Benjamin 23

Skosana, Vusi 26

Skotareva, Olga 18

Skulberg, Per Kristian 31

Snashall, David 23, 30

Spaling, Harry 21

Steenkamp, Tasneem 36

Steinhauer, Ineke 32

Stratulat, Grigore 17

Stroebel, Kelly 24

Sudmeier, Karen 32

T

Takeda, Shingo 28

Tamir, Irit 24, 27

Tarr, Peter 37

Taute, Dylan 41

Tlale, Sophia 38

Todd, Iain 24

Toure, Sekou 16

True, Denise 25

Tumbama, Lewis 17

U

U, Clara 17, 26, 35

V

Valencia, Claudia 30

van Bochove, Jan-Willem 27, 36

van Boven, Gwen 19, 34

van den Berg, Stephan 23

Van Ghelue, Pascal 41

van Merm, Remco 31

van Rooyen, Magnus 18

van Staden, Francini 40

van Straaten, Dick 25, 29, 41

van Weele, Gerard 20, 21

Venter, Marius 22

Vilardo, Cristiano 32

Viliani, Francesca 41

Vincent-Akpu, Ijeoma 26, 28

von Hase, Amrei 28

Vu, Chi Cong 34

W

Walker, Heidi 21, 32

Walmsley, Bryony 23

Walsdorff, Annick 32

Warburton, Catherine 18

Wellmann, Gwendolyn 20, 36

Wessels, Jan-Albert 18

Westbury, Mark 41

Wicomb, Wilimein 24

Wieland, Patrick 25

Wilkinson, Lachlan 35

Winkler, Mirko 23, 33

Wright, Denise 34

Wu, Jing 37

X

Xiao, Yina 33

Y

Yang, Kyung 40

Yi, Young-Jae 18

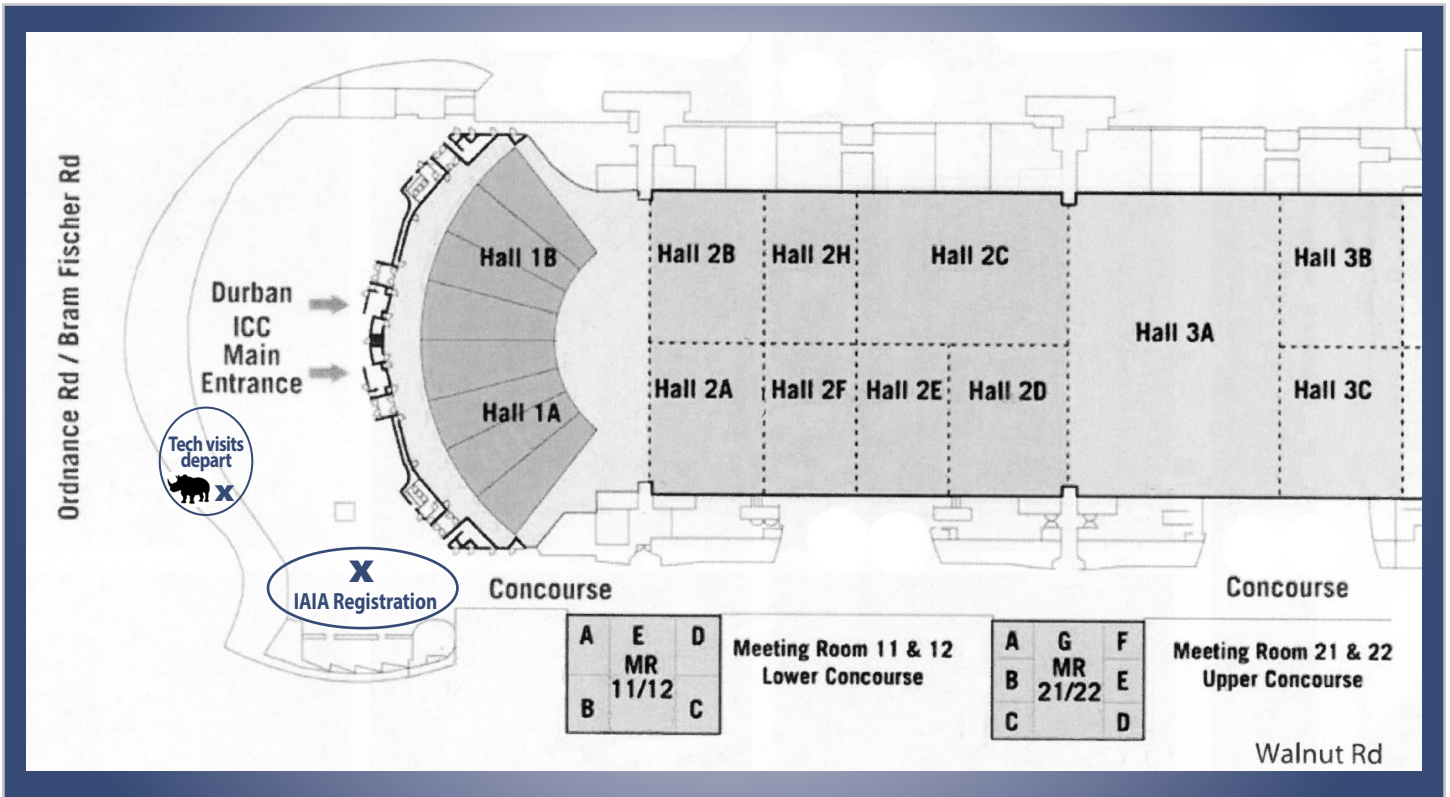
Z

Zengin, Zinnure Osman 24

Zhu, Yongyan 31, 41

Durban International Convention Center (ICC)

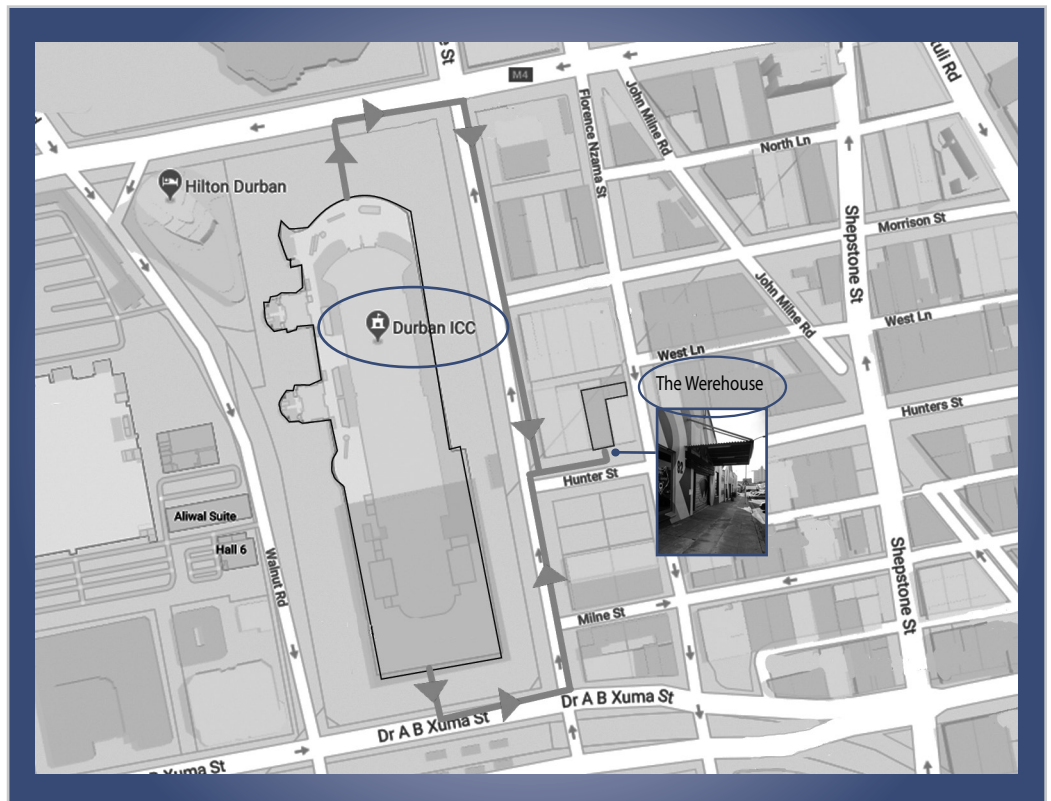
45 Bram Fischer Road, Durban



The Warehouse

82 Hunter Street, South Beach, Durban

A "people mover" shuttle will run between the Warehouse and Southern Sun Elangeni & Maharani Hotel, the Garden Court Marine Parade Hotel, the Garden Court South Beach, and the SunCoast Hotel & Towers hotels from 18:30-20:00 and 21:30-23:00.



THE ONLY INTERNATIONAL, INTERDISCIPLINARY, EDUCATIONAL CONFERENCE DEDICATED TO ADVANCING THE ART AND SCIENCE OF IMPACT ASSESSMENT!

IAIA and IAIAAs gratefully acknowledge these companies and organizations for their generous financial and in-kind support of IAIA18.

By sharing their resources, these companies and organizations demonstrate their commitment to the environment and contribute to the improvement of impact assessment around the globe.

When you meet a representative of these sponsors, at the conference or in the months ahead, please be sure to thank them for their contributions.

Sponsors have no explicit nor implied right to influence the conference program. Program elements contributed by sponsors are reviewed and monitored by the Program Committee.

Conference venue

Durban International Convention Centre (ICC)

45 Bram Fischer Road, Durban 4001
South Africa
<https://icc.co.za/>

PREMIER SPONSORS



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

ISLAND SPONSORS



REEF SPONSORS

Canadian Environmental
Assessment Agency

EIB

IsoMetrix

Millennium Challenge Corporation

Prizma

SEMADET Jalisco

Sichuan Tianyu Petroleum

Wood

CAPACITY BUILDING PARTNER



PROMOTIONAL PARTNERS



OFFICIAL AIRLINE OF IAIA18



International Headquarters
1330 23rd Street South, Suite C
 Fargo, ND 58103-3705 USA
 Phone +1.701.297.7908 • Fax +1.701.297.7917
 info@iaia.org • www.iaia.org

Environmental impact assessment in Taiwan drives the inclusion of social impact assessment guidelines

Yen-Chun Liu¹, Yu-Yung Wen¹, Chih-Kai Yang¹

¹ Department of Comprehensive Planning, Environmental Protection Administration, Taiwan

Abstract

In Taiwan, assessing the social impacts is one of the environmental impact assessment items since the "Environmental Impact Assessment Act" was promulgated in 1994. By evaluating the potential impact of development activities or government policies on social environment to achieve social justice, EPA Taiwan is now proceeding to draw up the guidelines for social impact assessment, which mainly assesses the migration, rights and interests of a majority of local residents, or the traditional lifestyle change of the minority nationality, and the impact on lifestyle of local residents, land use and restriction or social structure. Furthermore, the guidelines for social impact assessment also regulates the response strategies or alternate plans for adverse impacts.

1. Introduction

In 1994, Taiwan enacted and implemented the "Environmental Impact Assessment Act." The precursor to the design of this system was the National Environmental Policy Act (NEPA) in the USA. The law divided environmental impact assessment into 2 stages so that the industry competent authorities can consider the environmental impact caused by decision-making and alternative proposals when issuing approvals. This is to prevent and mitigate the adverse effects caused by development activities in order to achieve environmental conservation.

However, during the legislative process for environmental impact assessment (EIA), the Legislative Yuan changed the competent authorities of the target industry, which were responsible for inspecting environmental assessment, to the environmental protection competent authorities, and conferred internationally unique veto power to them. This is due to certain political facts at that period of time, such as the forth nuclear power plant referendum, and the Sixth Naphtha Cracking Plant protests. However, due to the veto power of the EIA, the development permit issued by the industry competent authority has weakened, and

disputes of all parties are more focused on environmental protection competent authorities. In addition, administrative remedies have been mostly transferred to EIA procedures. Other environmental competent authorities (such as the Council of Agriculture, Fisheries Agency) also showed signs of changing the EIA sites to implement their policy goals.

In view of this, the thinking of the Taiwan Environmental Protection Administration (EPA) on multiple current development and economic disputes is that the relevant evaluation and review mechanisms have gradually matured and are complete as regards the needs of traditional environmental topics (such as air, wastewater, garbage, health risk, ecology, etc.). With regard to the social impact, the current goal of the Taiwan EPA is to determine how the EIA procedure is viewed and executed to achieve informed communication with rights-related citizen's groups in the EIA process.

2. Current Situations

The current EIA and social impact-related laws are as follows:

- (1) Article 4 of the Environmental Impact Assessment Act defined EIA as: An environmental management plan based

on scientific, objective, and comprehensive surveys, forecasting, analyses, and evaluations conducted prior to project implementation in order to determine the degree and scope of the potential impact of development activity or government policy on the environment (including the living environment, natural environment, and social environment), economy, culture, and ecology, and the public explanation and review of such a plan.

- (2) The Environmental Impact Assessment Enforcement Rules specified the criteria to enter the second stage of EIA as: “Those circumstances in which development activity has a significant adverse impact on the movement or rights of local residents or the traditional ways of living of minority ethnic groups.”
- (3) The “Operating Guidelines for Environmental Impact Assessment of Development Behavior” specified that “The development unit should evaluate the effects towards the cultural asset (including underwater cultural assets), cultural landscapes, population distribution, lifestyle of local residents, land use types and restrictions, social structure...” It was also said that it should consider the negative effects into the environmental protection measures or seek alternative solutions.

Taiwan’s relevant current laws on social impact on development behavior involving land acquisition include “Urban Planning Law”, “Urban Renewal Act”, “Land Expropriation Act”. Relevant laws for impact assessment when the rights of indigenous people are involved include “Indigenous Peoples Basic Law”, “The Land Allocation Method for Indigenous Peoples Lands and Tribes (Interim)”. Especially, Article 21 of the “Indigenous Peoples Basic Law” states that when governments or private parties

engage in land development, resource utilization, ecology conservation, and academic research in indigenous lands, tribes, and their adjoining lands, they shall consult and obtain consent or participation from indigenous peoples or tribes and share the benefits of the development with them.

3. Cases in which conflicts arose from the social impact of the EIA in Taiwan and review

The following section uses the “Sun Moon Lake Xiangshan Hotel BOT case” as an example of the shortcomings of social impact assessment in Taiwan’s current EIA system.

(1) Development background

In order to promote the local economy and the tourism industry in Sun Moon Lake in Nantou County, the Sun Moon Lake National Scenic Area Administration commissioned Zhongcheng Hotel Pte Ltd to develop public infrastructure in accordance with the “Act for Promotion of Private Participation In Infrastructure Projects.” The development site is located at Shuishe Village, Yuchi Township, Nantou County, and belongs to the Xiangshan area within the Sun Moon Lake National Scenic Area, i.e., State land. The area of the site is 2,7949 hectares and the land use allocation is for a “tourism-specific area.” There was a plan to construct a Xiangshan hotel with 8 stories above the ground and 2 basement floors, total height would be 21.6 m.

(2) EIA review results

In 2011, the industry competent authority, the Tourism Bureau, transferred the EIA to Taiwan EPA for review. After 5 initial reviews by the ad-hoc group and 1 discussion by the EIA review committee, doubts about environmental impact have been clarified and the developer has proposed prevention and mitigation measures. The decision was

therefore “approved” under the condition that “the development unit should obtain an official letter from the Sun Moon Lake National Scenic Area Administration that this case has complied with Article 21 of the Indigenous Peoples Basic Law by the Council of Indigenous Peoples before starting construction.”

(3) Items questioned and rejected by citizen’s groups

A. The EIA review only focused on reducing pollution and did not fully analyze the level of acceptance in Thao people (one of the indigenous groups in Taiwan with the lowest populations, with only 700 people) for the total amount of pollution (increase plus background value) after development.

B. After the development and operation of this proposal, there will a large number of tourists and different consumer behavior and lifestyles in the traditional life of the Thao tribe. With regard to the type or scale of negative impact on the Thao tribe’s traditional culture, lifestyle, and land use, the developer only briefly mentioned that “the land for the Xiangshan BOT hotel case does not belong to the cultural space of ancestor worship and ritual and the living space of the Thao people.” The description of environmental impact provided by the developer “After development, residents will be imported that will have different lifestyles with local tribes. This will stimulate the local social environment to improve towards a goal of a higher quality of life” - is evidently an attitude that discriminate against the lives and cultural traditions of minority tribes.

C. Legal development and utilization of the land of indigenous people by the

private corporation must be approved by the indigenous people as a prerequisite.

(4) EIA review was submitted for administrative relief

With regard to the condition attached to the review process of the EIA in response to the protests of the public groups, the Sun Moon Lake National Scenic Area Administration filed an appeal: “the development unit should obtain an official letter from the Sun Moon Lake National Scenic Area Administration that this case has complied with Article 21 of the Indigenous Peoples Basic Law by the Council of Indigenous Peoples before starting construction.” The attached condition in that the conclusion was removed after the Executive Yuan judged that the object of obligation should be the development unit and not the Sun Moon Lake National Scenic Area Administration.

The Thao tribe mobilized around 100 people to protest at the EIA review committee and issued a statement that the Xiangshan area belongs to the traditional area of the Thao tribe and this project did not seek approval from the Thao people and therefore violates the Indigenous Peoples Basic Law. They were dissatisfied with the disciplinary actions taken by the Taiwan EPA through the EIA and appealed to the Executive Yuan's appeal committee. After the appeal, a decision was made to revoke the original disciplinary actions.

4. Current status of development of social impact assessment technical specifications and problems encountered

The existing technical specification draft is referenced from relevant international social impact assessment principles, guidelines, and practical reports. This includes data from IAIA, USA, Canada, and

other international organizations or countries. Items that were focused on included:

- (1) The purpose of drafting the technical specifications, and the applicable targets are the developer and stakeholders.
- (2) Definition of stakeholders.
- (3) Definition of range of impact.
- (4) Development behavior may involve non-voluntary migration. The developer will fully disclose relevant information as much as possible and seek opinions, which will be recorded and stated in environmental impact manuals or assessment forms.
- (5) Stakeholders should be independently evaluated. The competent authority should try to invite stakeholders to participate in relevant meetings as much as possible.
- (6) List of evaluation types and their items and factors.
- (7) Evaluation emphasizes public participation and the use of tools and methods with community participation.
- (8) Content included in evaluation operating procedures.
- (9) The environmental impact manuals and assessment forms should include social impact assessment content.

In view of the fact that the survey quality and evaluation results of previous EIA reports are often questioned by the public, we hope that in these technical specifications, when development behavior involves non-voluntary migration and indigenous people, tribes, or communities, which are prone to cause major disputes, and when the stakeholders have doubts about the development behavior or evaluation operations, the stakeholders must jointly choose the authors responsible for social impact assessment projects, propose independent assessment reports, and submit them to competent authorities. These will all be reviewed by the EIA committee.

The aim of setting up an independent

assessment report is to present the viewpoints of the stakeholders and increase the credibility of social impact description or evaluation content. Towards this end, the spirit of Canada's system "Participant Funding Program" and some relevant cases from Australia will be used as references in the report. With regard to possible involvement in forced migration and indigenous tribes or communities and when the second stage of EIA for development behavior should be carried out, the stakeholders can independently implement this or commission institutions or groups that have the ability to carry out independent social impact assessment.

However, with regard to the system for which it is stipulated, "Stakeholders can independently implement social impact assessment. The competent authority should try to invite stakeholders to participate in relevant meetings as much as possible," the following problems remain:

- (1) This does not conform to the mechanisms in the current Taiwan Environmental Impact Assessment Act, in which the developer commissions environmental impact technical consultancies to carry out EIA of development behavior. Even if the developer commissions stakeholders, there is a high degree of doubt about who should implement it, because in addition to professional qualifications, there is also a question of how to make choices that are credible or representative. There is also a problem of whether other disputes will arise due to the need to pay stakeholders.
- (2) In view of the aforementioned, under the legal premise that human rights cannot be restricted by administrative regulations, how to use technical specifications to restrict or request citizen groups to autonomously point out content for social impact assessment reports (including framework, items, methods, etc.) and for

citizens to generate a report for joint review will create impediments due to their effects and restrictions.

5. Conclusions

Under the unique veto rights system that forms a part of Taiwan's environmental impact assessments (EIAs), EPA Taiwan is actively studying applicable technical specifications for social impact assessments. It hopes any actions taken by developers will consider the subsequent social impact, along with various rights relating to ordinary people, organizations, ethnic minorities and traditional indigenous and tribal areas. Under the premise of full knowledge of the facts and full communication, these groups should not only participate in such assessments with equal status, but should also be valued and fully discussed during the EIA review process. This will enhance the objectivity and fairness of the review committee's final judgment.

However, "guidelines for social impact assessments" are only a small step forward in reform of the Taiwanese EIA system. After all, aside from "environmental factors" involved in new developments, there are also factors relating to society, the economy and culture that need to be considered. The ultimate aim is to return to the development permits issued by the industry competent authorities.

Social impact assessments are different from natural environment impact assessments in that it is impossible to establish scientific and objective standards as a basis for final approval by EIA review committee. In fact, the quality of social impact assessments does not necessarily depend on setting criteria needed for a project to be approved during EIA review. Rather, this involves enhancing stakeholders' understanding of the new development's degree of influence, as well as enhancing communication and formulating sound impact management plans. Therefore, social

impact assessment technical specifications need to take into account the processes of evaluation and management in order to bring about substantial benefits. Furthermore, the social impact assessment technical specifications also need to regulate the response strategies or alternate plans for adverse impacts.

In order for stakeholders to conduct an independent assessment or jointly select an author to produce a social impact assessment report, laws relating to environmental impact assessments will need to be amended and a professional community with expertise in social impact assessments will need to be cultivated.

6. Acknowledgement

The authors thank the Risk Society and Policy Research Center, National Taiwan University of the Republic of China for executing the project "A Study of Application of Technical Guidelines for Social Impact Assessment in Environmental Impact Assessment" under the contract EPA-105-E103-02-A289.

7. References

International Association for Impact Assessment (IAIA), 2015. Social Impact Assessment: Guidance for assessing and managing the social impacts of projects. Environmental Protection Administration, Taiwan, 2017. A Study of Application of Technical Guidelines for Social Impact Assessment in Environmental Impact Assessment.

Assessing the social impacts in EIA

Yen-Chun Liu

Specialist of Department of Comprehensive Planning,
Environmental Protection Administration, Taiwan

May 17 , 2018, Durban, South Africa



1

Contents

- ◆ **Taiwan at a glance**
- ◆ **Introduction**
- ◆ **Current situations**
- ◆ **A case in which conflicts arose**
- ◆ **SIA specifications(draft) and problems encountered**
- ◆ **Conclusions**

2

Taiwan at a glance

Location

Situated in East Asia at the western edge of the Pacific, Taiwan possesses an endless variety of terrains, forests, agricultural products, and marine ecosystem.



High population density with limited resources

Taipei City



Taipei 101

Source: <https://www.hosotour.com/shop台北101觀景台門票>



Population: 23 million



Area: 36,000 km² (3% of South Africa)
(0.36% of the USA)



Population density: 624 people/km²

(Taipei City : 9,956 people/km²)



Imported Energy > 98%



Imported Mineral > 80%



Imported Food > 70%

If you are planning a **trip** to east Asia, **Taiwan** is the best choice!

5

Introduction

Environmental Impact Assessment Act

- ◆ Taiwan enacted and implemented the “Environmental Impact Assessment Act.” in 1994
 - Precursor: NEPA, USA
 - EIA process: 2 stages
- ◆ **Changes** during legislative process
 - Responsible authorities were changed from the industry competent authorities to the **environmental protection competent authorities**
 - Internationally unique **VETO POWER**



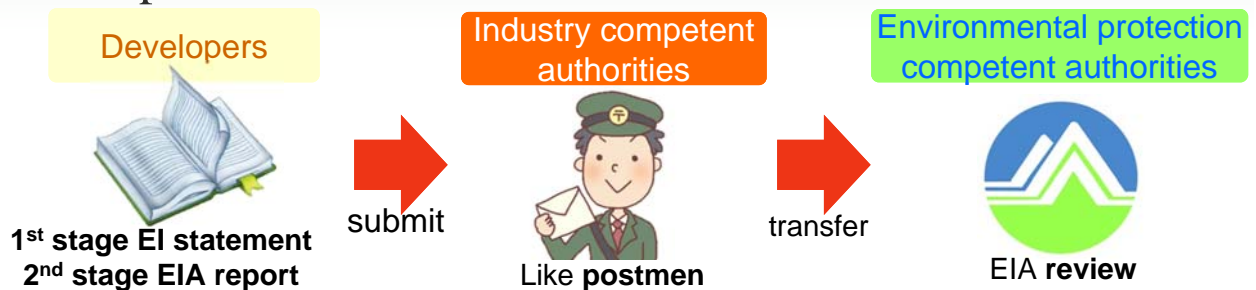
Source: <http://www.cooloud.org.tw/node/58330>



Source: Taipei people news

EIA Act with VETO POWER_{1/2}

- ◆ The power of development permits issued by the industry competent authorities has **weakened**



- ◆ **Disputes** of all parties are more focused on environmental protection competent authorities



Supporter (local residents)

Source: Taiwan Environmental information center



Opponent (local residents)

Source: Liberty Times Net



Legislators

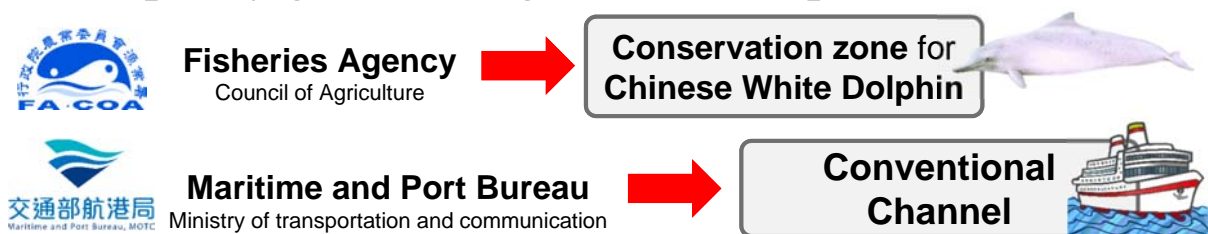
Source: United Daily News

EIA Act with VETO POWER_{2/2}

- ◆ Administrative remedies have been mostly transferred to EIA procedures



- ◆ Other environmental competent authorities implement their policy goals during EIA review process.



9

Thinking

- ◆ Relevant evaluation and review mechanisms have gradually matured and are complete as regards the **traditional environmental topics**
 - **Technical specifications** for air quality, river quality, noise, vibration, health risk, animal/plant/marine ecology, etc.
- ◆ With regard to the **social impact** the current goal is to determine how the EIA procedure is viewed and executed to achieve informed communication with rights-related citizen groups in the EIA process
 - **To establish technical specifications or guidelines for social impact assessment.**
 - **SIA reports will be submitted to EIA review committee for reference.**

10

Current situations

11

Laws related to social impact^{1/2}

◆ Environmental Impact Assessment Act

➤ **Definition** of EIA (article 4)

- An environmental management plan based on scientific, objective, and comprehensive surveys, forecasting, analyses, and evaluations conducted prior to project implementation in order to determine the degree and scope of the potential impact of development activity or government policy on the **environment (including the living environment, natural environment, and social environment)**, **economy**, **culture**, and ecology, and the public explanation and review of such a plan.

◆ Environmental Impact Assessment Enforcement Rules

➤ Criteria to enter the **second stage EIA** (article 38)

- Those circumstances in which development activity has a significant adverse impact on the **movement or rights of local residents** or the **traditional ways of living of minority ethnic groups**.

12

Laws related to social impact^{2/2}

- ◆ Laws related to social impact on development behavior involving **land acquisition**
 - Urban Planning Act
 - Urban Renewal Act
 - Land Expropriation Act

- ◆ Laws related to social impact on development behavior involving the rights of indigenous people
 - **Indigenous Peoples Basic Law**
 - Article 21 stated that when governments or private parties engage in land development, resource utilization, ecology conservation, and academic research in indigenous lands, tribes, and their adjoining lands, **they shall consult and obtain consent or participation from indigenous peoples or tribes and share the benefits of the development with them.**

13

A Case in which conflicts arose

14

Sun Moon Lake Xiang-Shan hotel BOT case^{1/5}

◆ Development background

- Object: In order to promote the local economy and the tourism industry in Sun Moon Lake, the Sun Moon Lake National Scenic Area Administration commissioned a local private company to develop public infrastructure in accordance with the “**Act for Promotion of Private Participation In Infrastructure Projects.**”
- Site: The site is within the Sun Moon Lake National Scenic Area (i.e., **State land**). The area is 3 hectares and the land use allocation is for “**tourism-specific area.**” There was a plan to construct a Xiang-Shan hotel with 8 stories above the ground and 2 basement floors, total height would be 24 meters.

Sun Moon Lake Xiang-Shan hotel BOT case^{2/5}

◆ The beauty of Sun Moon Lake



Sun Moon Lake Xiang-Shan hotel BOT case^{3/5}

◆ EIA review result

- After 5 initial reviews by the ad-hoc group and 1 discussion by the EIA review committee.
- Doubts about environmental impact have been **clarified** after the developer has proposed **prevention** and **mitigation** measures.
- The result was “**approved**” **under the condition that** “the developer should obtain an official letter from the Sun Moon Lake National Scenic Area Administration that this case has complied with Article 21 of the Indigenous Peoples Basic Law by the Council of Indigenous Peoples before starting construction.”

◆ Administrative disposition

- An administrative disposition was made (the same as the EIA review result) by EPA.

17

Sun Moon Lake Xiang-Shan hotel BOT case^{4/5}

◆ Items questioned and rejected by Thao tribe

- EIA review only focused on reducing pollution and did not fully analyze the level of acceptance in Thao tribe (one of the indigenous groups in Taiwan with the lowest populations, only 700 people) for the total amount of pollution (increase plus background value) after development.
- “After development, residents will be imported that will have different lifestyles with local tribes. This will stimulate the local social environment to **improve towards a goal of a higher quality of life**” is evidently an attitude that discriminate against the lives and cultural traditions of minority tribes.
- Legal development and utilization of the indigenous land by the private corporation **must be approved by the indigenous people** as a prerequisite.



Source: United Daily News



Source: Chinatimes.com

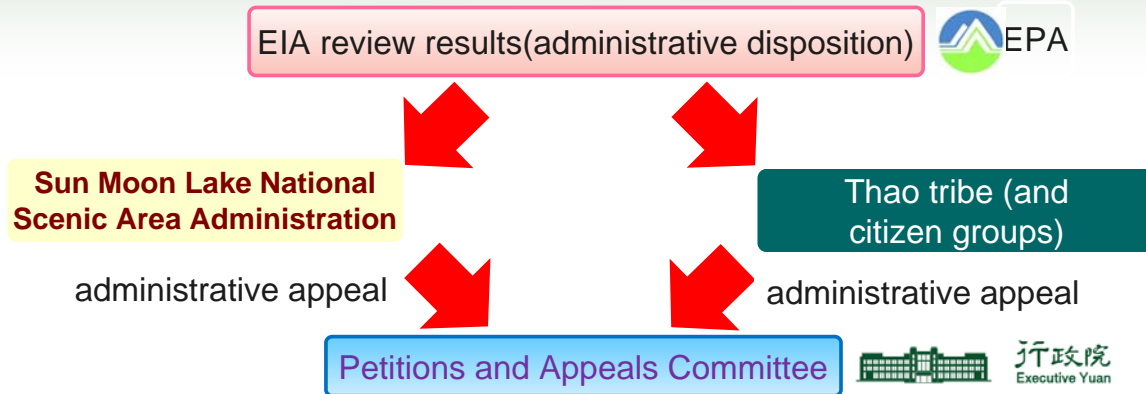


Source: Liberty Times Net

18

Sun Moon Lake Xiang-Shan hotel BOT case^{5/5}

◆ Administrative appeal



- **Reason for appeal:**
Attached condition
- **Result of appeal:**
The attached condition was **removed**.
- **Reason:**
The object of obligation should be the developer and not the Sun Moon Lake National Scenic Area Administration.

- **Reason for appeal:**
EIA review result “approved”
- **Result of appeal:**
The administrative disposition was **revoked**.
- **One of the reasons:**
Xiang-Shan area belongs to the traditional area of the Thao tribe. This project did not seek approval from the Thao people and therefore violates the Indigenous Peoples Basic Law.

19

SIA technical specifications draft

Promotion of specifications for SIA

- ◆ From 2016 to 2017, EPA Taiwan commissioned the National Taiwan University (Risk Society and Policy Research Center) to draft the technical specifications.
- ◆ The draft is referenced from relevant international social impact assessment principles, guidelines, and practical reports.
- ◆ In considerations of important social topics, such as human rights, indigenous people, land expropriation, non-voluntary migration, etc.
- ◆ Items that were focused on include the following:
 - The applicable targets are **the developers** and **stakeholders**.
 - **Definition of stakeholders, range of impact, scope of assessment.**
 - Development behavior may involve non-voluntary migration. The developer must **fully disclose** relevant information as much as possible and seek opinions.
 - **Stakeholders can evaluate the impact of development behavior independently.** The competent authority should try to invite stakeholders to participate in relevant meetings as much as possible.
 - Evaluation emphasizes public participation and the use of methods with community participation.

21

SIA technical specifications draft

Article	Content
1	Purpose & Applicable Targets
2	Definition of stakeholders, range of impact, scope of assessment
3	Range of impact should not be restricted to districts
4	Stakeholders can evaluate the impact of development behavior independently. The competent authority should try to invite stakeholders to participate in relevant meetings as much as possible
5	Development behavior may involve non-voluntary migration. The developer must fully disclose relevant information as much as possible and seek opinions
6	List of evaluation types and their items
7	Procedure of social impact assessment and content included in SIA procedure
8	Evaluation emphasizes public participation and the use of methods with community participation
9	Items to be included in 1 st stage social impact statement
10	Items to be included in 2 nd stage social impact assessment report

22

Mechanism of independent assessment

- ◆ In view of fact that the **survey quality** and **evaluation results** are often questioned by the public.
- ◆ When development behavior involved non-voluntary migration, indigenous people, tribes or communities, and is prone to cause **major disputes**, and when the stakeholders **have doubts** about the evaluation results made by the developer, the stakeholders can (1)implement by themselves, (2)commission professional institutions or groups or (3)jointly select the authors to propose independent assessment reports, and submit them to competent authorities. **These will all be reviewed by the EIA committee.**(for reference only, it can not be used as a basis for review decision.)
- ◆ The **aim** of setting up an independent assessment report is to **present the viewpoints of the stakeholders** and **increase the credibility** of social impact description and evaluation results.

23

Problems encountered

- ◆ SIA technical specifications can not conform to mechanisms of current EIA Act, in which **the developer commissions technical consultancies to carry out EIA** of development behavior.
- ◆ Even if the developer commissions stakeholders to carry out SIA, there is a high degree of doubt about **who** should implement SIA, because in addition to professional qualifications, there is also a question of how to make SIA credible or representative. There is also a problem of whether other disputes will arise due to **the need to pay stakeholders**.
- ◆ Under the legal premise that human rights cannot be restricted by administrative regulations, **how to use technical specifications to restrict or request** stakeholders, citizen groups to autonomously propose social impact assessment reports.

24

Conclusions

Conclusions

- ◆ Technical specifications for social impact assessments are only a small step forward in reform of the Taiwanese EIA system. The ultimate aim is to **return to the development permits** issued by the industry competent authorities.
- ◆ The essence of social impact assessments does not necessarily depend on setting criterion needed for a project to be approved during EIA review. Rather, this involves **enhancing stakeholders' understanding** of the new development's degree of influence, as well as **enhancing communication** and formulating sound impact management plans.
- ◆ In order for stakeholders to conduct an independent assessment or jointly select an author to produce a social impact assessment report, laws relating to EIA will need to be amended and **a professional community with expertise in social impact assessments** will need to be cultivated.

Thank you for your attention

