Special Symposium organized by the IAIA Biodiversity & Ecology Section 7-8 February 2013 | Inter-American Development Bank | Washington , D.C.

Final Program Biodiversity & Ecosystem Services in Impact Assessment



"100 Species of Animals in My Garden" by Kevin Murphy International Year of Biodiversity 2010 "Inspired by Nature" contest Honorable Mention

Human activity is putting such a strain on the natural functions of Earth that the ability of the planet's ecosystems to sustain future generations can no longer be taken for granted.

- Ahmed Djoghlaf, Convention on Biological Diversity









About the Program

Symposium Themes

Baselines and data collection

Biodiversity Risk Assessment

Biodiversity and Extractives

Biodiversity and Agriculture

Net Positive Impact Forecasting and Offset Design

Monitoring and Adaptive Management

Identification and Valuation of Ecosystem Services

Engaging Communities on Biodiversity and Ecosystem Services

GIS and Landscape Analysis

Planning and Regional Strategies

Table of contents

About the Program **2**

Keynote Speaker 2

Daily Agenda 3

Technical Program Overview 4

Plenaries and Sessions 6

Poster Presentations 12

Twenty years after the Convention on Biological Diversity was first drafted, the world continues to see unprecedented loss of species. The implications are largely unknown, but the European Commission estimates that, by 2050, economic loss due to loss of ecosystem services will amount to 19 trillion USD.

Compounding the challenge are the silos in which the conservation community and the public and private sectors driving development operate. To better integrate conservation science into planning processes, science and practice need to come together to build capacity in the field of impact assessment.

The aim of this symposium is to bring together practitioners working at the cutting edge with both policy makers responsible for shaping IA frameworks and scientists committed to finding practical ways forward.

The timing could not be better! A growing number of biodiversity initiatives are aimed at creating communities of practice, ranging from cross-sector initiatives across industries to biodiversity working groups comprised of multilateral financial institutions and Equator Principles banks. The challenge is to better understand how to assess biodiversity values, identify dependence on—and impacts to—ecosystem services, design better mitigation strategies following the mitigation hierarchy, effectively monitor changes in biodiversity and ecosystem services over time, and implement adaptive management to manage uncertainties over the long term.

The Symposium offers four tracks in concurrent sessions:

Track A: Tools, Methods and Information Resources

Track B: Applying Impact Assessment to Private and Public Decision-Making

Track C: Policy, Planning, and Management

Track D: Computer Workshops on Tools and Information Resources

Pavan Sukhdev – Keynote Speaker

Pavan Sukhdev is Founder-CEO of GIST Advisory, a specialist consulting firm which helps governments and corporations discover, measure, value, and manage their impacts on natural and human capital. He is a Visiting Fellow at Yale University, where he was awarded the 2011 McCluskey Fellowship and wrote his book *Corporation 2020*. Earlier, he was Special Adviser and Head of UNEP's Green Economy Initiative, and lead author of their report "Towards a Green Economy." He was also Study Leader for the G8+5 commissioned project on The Economics of Ecosystems and Biodiversity ("TEEB"). Pavan was appointed to lead TEEB by the EU Commission and Germany, and delivered its "Interim Report" while still working full time at Deutsche Bank in 2008. A career banker, Pavan then took a sabbatical from the Bank to lead TEEB and the Green Economy Initiative for UNEP. While at Deutsche Bank, Pavan had founded (2006) and then chaired Global Markets Centre-Mumbai, a leading-edge front-office offshoring company. Pavan was a speaker at the World Economic Forum meetings at Davos in 2010 and 2011. He serves on the boards of

Technical Program: Topical Tracks

- A Tools, Methods, and Information Resources
- B Applying Impact Assessment to Private and Public Sector Decision Making
- C Policy Planning, and Management
- D Computer Workshops on Tools and Information Resources

Thursday, February 7

	,
08:00	Welcome coffee and networking. 🛯 Sponsored by Environ.
09:00-09:30	Registration
09:30-10:30	Welcome and Keynote
10:30-10:45	Coffee Break. 🕨 Sponsored by Environ.
10:45-11:15	Plenary Session: IA and the Landscape Approach
11:15-12:00	Plenary Session: Net Positive Impact Forecasting and Offset Design
12:00-13:15	Lunch
13:15-14:45	Concurrent Sessions 1
14:45-15:00	Coffee Break
15:00-16:30	Concurrent Sessions 2
16:30-18:00	Poster Session
18:00-19:00	Reception

Friday, February 8

16:00-17:00	Closing Plenary
14:30-16:00	Concurrent Sessions 6
14:15-14:30	Coffee Break
12:45-14:15	Concurrent Sessions 5
11:45-12:45	Lunch
10:15-11:45	Concurrent Sessions 4
10:00-10:15	Coffee Break. 🕨 Sponsored by Environ.
08:30-10:00	Concurrent Sessions 3
08:00	Welcome coffee and networking. 🔇 Sponsored by Environ.

There has been a 30% decline in global biodiversity since 1970. – Z SL Living Planet Index

Registration

Upon arrival at the venue, you will check in and receive a security pass from IDB.

You will then proceed to the IAIA conference desk, where you will be provided with the symposium program, participants list and name tag.

Both the IAIA name tag and the IDB security pass are required.

Technical Program Overview

Thursday, 7 February

	Room 1 TRACK Tools, Methods, and Information Resources	Room 2 TRACK Applying IA to Private and Public Sector Decision Making	Room 3 TRACK Policy, Planning, and Management	Training Room TRACK Computer Workshops on Tools and Information Resources	Room 4
09:00-09:30	Registration		Ь		
09:30-10:30	Welcome and Keynot		SETUP		
10:30-10:45	Coffee Break (Sponsored by Environ)				
10:45-11:15	Plenary Session: IA a		POSTER		
11:15-12:00	Plenary Session: Net				
12:00-13:15	Lunch				
13:15-14:45	Baselines and Data Collection (presentations)	Biodiversity, Ecosystem Services, and Infrastructure <i>(panel)</i>	Integrating Biodiversity and Ecosystem Services Conservation into Planning and Regional Strategies (panel)	Integrated Biodiversity Assessment Tool (workshop)	POSTERS
14:45-15:00	Coffee Break				
15:00-16:30	Biodiversity Databases and Tools (presentations)	Biodiversity, Ecosystem Services, and Agriculture <i>(panel)</i>	ID and Valuation of Ecosystem Services <i>(panel)</i>	NatureServe Tools (workshop)	ΡO
16:30-18:00	Poster Session				
18:00-19:00	Reception				



Technical Program Overview

Friday, 8 February

	Room 1 TRACK	Room 2 TRACK	Room 3 TRACK	Training Room	Room 4
	Tools, Methods, and Information Resources	Applying IA to Private and Public Sector Decision Making	Policy, Planning, and Management	Computer Workshops on Tools and Information Resources	
08:30-10:00	Biodiversity Risk Assessment and Conservation Priorities: Identifying Biodiversity Values (presentations)	Biodiversity, Ecosystem Services, and Energy <i>(presentations)</i>	Front Loading Biodiversity Action Plans (workshop)	Exploring Two Approaches to Ecosystem Services Valuation <i>(workshop)</i>	
10:00-10:15	Coffee Break (Sponsored by Environ)				
10:15-11:45	Indirect and Cumulative Impact Assessment (presentations)	Critical Habitat Assessment and IFC Performance Standard 6 (presentations)	Engaging Communities on Biodiversity and Ecosystem Services (presentations)	Databasin Environmental Assessment Tool (workshop)	POSTERS
11:45-12:45	Lunch				
12:45-14:15	GIS and Landscape Analysis (presentations)	Biodiversity, Ecosystem Services, and Extractives <i>(panel)</i>	Monitoring and Adaptive Management <i>(presentations)</i>	InVEST Ecosystem Services Valuation Tool <i>(workshop)</i>	Ρ
14:15-14:30	Coffee Break				
14:30-16:00	Key Biodiversity Areas: Contribute to the Development of a Global Standard (workshop)	Aquatic Biodiversity and Ecological Flows <i>(presentations)</i>	Payments for Ecosystem Services (presentations)	A Method to Assess Project Impact and Dependence on Ecosystem Services (workshop)	
16:00-17:00	Closing Plenary				



Thursday, February 7

9:00 -10:30 Kickoff and keynote presentations

10:30 –10:45 Coffee Break 🕫 Proudly sponsored by Environ.

10:45–11:15 Plenary Session: IA and the Landscape Approach

11:15-12:00 Plenary Session: Net Positive Impact & Offset Design

Chair: Ray Victurine (Wildlife Conservation Society)

Panel:

- Jon Ekstrom (The Biodiversity Consultancy)
- Jared Hardner (Hardner & Gullison Associates)
- Francisco Dallmeier (Smithsonian Institute)

12:00 - 13:15 Lunch

13:15 – 14:45 Concurrent Sessions 1

(TRACK A) Baselines and Data Collection

Chair: Reed Huppman (Environ)

Presentations:

- Jared Hardner (Hardner & Gullison) Top 5 Most Common Mistakes in Baseline Assessment Studies
- **Jason Wiley** (ERM) Overcoming Uncertainties Regarding Newly Discovered Species' Resilience to Habitat Disturbance in the Context of EIA
- **Robert Langstroth** (Environ) Biodiversity Baselines for International Finance: Requirements, Constraints, and Recommendations

(TRACK B) Biodiversity, Ecosystem Services, and Infrastructure

Chair: Greg Radford (ESSA Technologies Ltd)

Panel:

- Chris Pullen (Export Development Canada)
- Juan Quintero (Independent Consultant)
- Alfonso Alonso (Center for Conservation Education & Sustainability)

Biodiversity is being lost at an alarming rate as a result of infrastructure developments. Mammal and bird population densities decline with their proximity to infrastructure. Habitat fragmentation from linear developments can have lasting and significant impacts that are often missed or ignored. This panel session will discuss the need for greater attention to be given to assessing and monitoring biodiversity and ecosystem services impacts from infrastructure through linear development and marine facility cases studies in Latin America. The session will also draw on recent examples and experience from an Equator Principles Financial Institution (EPFI).

Key topics for discussion:

- An Equator Principles Financial Institution (EPFI) exploration of the identification of Ecosystems Services impacted by infrastructure projects, mitigation measures proposed and detailed work required to fully implement them, including ongoing and dynamic adaptive management
- Impacts and offsets in road projects: case studies in Honduras and Colombia
- Integrating Biodiversity Monitoring and Assessment for a mega infrastructure pipeline construction project in Peru

(TRACK C) Integrating Biodiversity and Ecosystem Services Conservation into Planning and Regional Strategies

Chair: Orlando Venn

The aim of the session is to explore some of the challenges and current issues associated with the application of ecosystem services approaches to inform decision-making in the development of regional plans and strategies, and in the supporting impact assessment procedures. The working method consists of paper presentations and discussion.

Presentations:

- **Davide Geneletti** (University of Trento) Towards Ecosystem Services-inclusive Environmental Assessment Processes
- Valerie Hickey (World Bank) Managing Tradeoffs: Ensuring Attention to Nature when Planning Development Finance
- Steve Smith (URS) A Tool for Assessing Impacts and Dependence on Ecosystem Services

(TRACK D) Learning to Use the Integrated Biodiversity Assessment Tool (from IUCN and partners) to Support Recognition of Critical Natural Habitat and Other Sites of Environmental Concern in Proposed Projects

Workshop: Martin Sneary (IUCN)

Through the workshop, attendees will be trained in how to use IBAT to access and interpret information on key biodiversity values, such as protected areas, key biodiversity areas, and globally threatened species. The session will cover an introduction to the value of IBAT to inform screening of investments, live demonstration of the tool, and hands-on review of 2-3 case studies showing application of the tool and interpretation of the results.

14:45 – 15:00 Coffee Break

15:00 - 16:30 Concurrent Sessions 2

(TRACK A) Biodiversity Databases and Tools

Chair: Dennis Grossman (Conservation Biology Institute)

Presentations:

- Melissa Tolley (UNEP WCMC) UNEP World Conservation Monitoring Centre Data and Tools for Decision Making
- Dennis Grossman (Conservation Biology Institute) Using Databasin to Connect Spatial Users with Data Sets, Tools, and Expertise
- Martin Sneary (IUCN-IBAT) Screening for Environmental Risks Using the Integrated Biodiversity Assessment Tool (IBAT)
- Neil Cox (IUCN) IUCN Datasets and Tools to Support Conservation Planning and Assessment

(TRACK B) Biodiversity, Ecosystems, and Agriculture

Chair: Elizabeth Kennedy (Rainforest Alliance)

Panel:

- Gary Paoli (Daemeter Consultants)
- Lee Gross (EcoAgricultural Partners)
- Elizabeth Clarke/Michael Zrust (ZSL)
- Nuno Vilela (Sinergiae Ambiente)

Key topics for discussion:

- Does certification help conserve biodiversity in agriculture?
- What are the primary challenges with the High Conservation Value approach?
- How can ecosystem service review be improved in agriculture to better identify tradeoffs and synergies?

(TRACK C) ID and Valuation of Ecosystem Services

Chair: Lisa Mandle (Natural Capital Project)

Panel:

- James Spurgeon (Sustain Value)
- Carter Ingram (Wildlife Conservation Society)
- Shan Ma (Natural Capital Project)
- Suzanne Ozment (World Resources Institute)

Key topics for discussion:

- Are ecosystem services given enough attention in current ESIA practice?
- Should we be placing a monetary value on ecosystem services?
- Are the methodologies available for valuation of ecosystem services?

Thursday, February 7

(TRACK D) NatureServe Tools

Workshop: Leslie Honey

NatureServe develops, deploys, and shares a variety of tools that facilitate effective decision-making and priority setting. This workshop will provide a brief overview and access to the following NatureServe tools:

NatureServe Vista: An advanced but accessible desktop GIS decision support system that can facilitate all of your land and water assessment, planning and resource management projects at multiple scales anywhere in the world.

NatureServe Surveyor: Leveraging the best-available species data from across the United States and Canada, this subscription based online tool allows a user to screen for the known presence of threatened and imperiled plants and animals in the earliest stages of planning, due diligence, project selection, assessment, and review processes.

LandScope America: Dynamic, online comprehensive resource to promote land and water conservation in the United States.

Climate Change Vulnerability Index: Excel-based tool uses a scoring system to predict species' exposure and sensitivity to climate change within a defined geographic area.

16:30–18:00 Poster Session

18:00 - 19:00 Reception

Friday, February 8

8:30 - 10:00 Concurrent Sessions 3

(TRACK A) Biodiversity Risk Assessment and Conservation Priorities: Identifying Biodiversity Values

Chair: Jon Ekstrom

Presentations:

- Rashila Kerai (Holcim) Holcim's Approach to Biodiversity Risk Assessment
- **Jeff Hopkins** (Rio Tinto) Using Irreplaceability and Vulnerability in Corporate No Net Loss Policies
- Tony Whitten (Fauna & Flora International) Cave and Karst Biodiversity
- **Mark Fonseca** (CSA Oceans Science Inc.) Experimental Mitigation and Risk Acceptance: A Case Study Using Engineering of Seagrass Ecosystems

(TRACK B) Biodiversity, Ecosystem Services, and Energy

Chair: Jessica Boucher (Independent Consultant)

Presentations:

- Alvaro Camina (Independent Consultant) Guidelines for Assessing and Minimizing Impacts to Birds and Bats in Wind Energy Projects
- **Jacklyn Barrs** (Marine Mammal Observatory Association) Protection of Marine Mammals in Offshore Oil and Gas
- Erin Billman (Blu Skye Consulting) Heard in the C-Suite: Board Room Challenges Facing Ecosystem Services
- Walter W. Arensberg (Social Capital Group LLC) Integration of Environmental and Social Management
 Systems

(TRACK C) Front Loading the Biodiversity Action Plan to Fully Apply the Mitigation Hierarchy

Workshop: Pippa Howard (Fauna & Flora International) and Conrad Savy (Conservation International)

This workshop will focus on the scoping of baselines and the front end loading of information to feed into No Net Loss or Net Positive Impact approaches to ESIA.

Using case studies, participants will be asked to identify data requirements for preparation of a robust ESIA, and then make mitigation recommendations that align with project and financing timelines.

(TRACK D) Exploring Two Approaches to Ecosystem Services Valuation: EcoMetrix Solutions Decision Support Tools and the Local Ecological Footprint Tool

Workshop: Linda Hwang and Peter Long

In recent years, we have seen a proliferation of decision-support tools for integrating biodiversity and ecosystem services (BES) into impact assessment. This workshop will introduce participants to two of these tools, and using case studies and computers, the participants will explore the tools in more depth.

Demonstrations and Case Studies:

- Linda Hwang (EcoMetrix Solutions Group) EcoMetrix Solutions Group's Decision-Support Tools: Quantification of BES for Impact Analysis. With the Ecometrix tool, participants will walk through a pump station project in the Caucasus region from start to finish.
- **Peter Long** (University of Oxford) Local Ecological Footprinting Tool (LEFT)

10:00 - 10:15 Coffee Break 🔇 Proudly sponsored by Environ.

10:15-11:45 Concurrent Sessions 4

(TRACK A) Indirect and Cumulative Impact Assessment

Chair: Graham Watkins (Inter-American Development Bank)

Many biodiversity impacts are indirect or cumulative in nature. Project-level EIAs are generally limited to addressing direct impacts. CIAs are critical tools for drawing attention to cumulative and indirect biodiversity impacts which are often critical to sustainability. CIAs also serve as a bridge between project assessment and regional planning. This session will discuss how to mainstream CIAs, overcome constraints to using CIAs, and provide case studies demonstrating the value of the approach.

Presentations:

- Greg Radford (ESSA Technologies Ltd) Adopting a Cumulative Effects Mindset
- Julia Tims (ERM) Overcoming Challenges to Conducting Meaningful Cumulative Impact Analysis in Impact Assessment
- **Joe Keisecker** (The Nature Conservancy) Cumulative Impact Assessment Examples From the Field: Mongolia and Other Destinations
- Colin Rees (Independent Consultant) Cumulative Impact Assessment and Regional Planning in Northeast Haiti: Managing Indirect and Cumulative Impacts on Critical Natural Habitats

(TRACK B) Critical Habitat Assessment and IFC Performance Standard 6 (PS 6)

Chair: Lori Anna Conzo (International Finance Corporation)

Presentations:

- Conrad Savy (Conservation International) How to Do a Critical Habitat Assessment
- **Jon Ekstrom** (The Biodiversity Consultancy) How to Get a Project through PS 6: What is Involved Using a Real World Case Study
- Courtney Lowrance (Citi) Challenges in Identifying Critical Habitat
- Michal Zrust (ZSL) The Effectiveness of HCV Assessment as a Tool for Identifying Conservation Values

(TRACK C) Engaging Communities on Biodiversity and Ecosystem Services

Chair: Courtney Lowrance (Citi)

Presentations:

- **Emily Cooper** (ERM) Ecosystem Services: Focused Stakeholder Consultation within Traditional Impact Assessment Processes
- Alicia de la Cruz Novey (Environ) Making Ecotourism Work for Peru's Protected Areas
- Ariel Lupu (Hatch) GIS Approach to Consultation and Aboriginal Traditional Land Use and Occupancy Mapping
- **Robin Taylor** (Hatch) The Role of Consultation in Impact Mitigation: Habitat Enhancement/Port Mann Highway Improvement Project

Friday, February 8

(TRACK D) Databasin Environmental Assessment Tool

Workshop: Dennis Grossman (Conservation Biology Institute)

Databasin is a free, online system that connects users with spatial datasets, tools, and expertise. Individuals and organization can explore and download a vast library of datasets, upload their own data, create and publish analysis, utilize working groups, and produce customized maps that can be easily shared.

11:45–12:45 Lunch

12:45 - 14:15 Concurrent Sessions 5

(TRACK A) GIS and Landscape Analysis

Co-Chairs: Davide Geneletti and Dennis Grossman

GIS has greatly improved our ability to carry out landscape level analyses in support of regional planning, development and impact assessment. This session will provide examples where landscape level analyses assisted development activities to minimize environmental impact and maximize the benefits to conservation and ecosystem services.

Presentations:

- Bill Butcher (WGB Environment) Critical Habitat Mapping of a Transboundary Pipeline
- Gary Paoli (Daemeter) Using GIS to Screen for High Conservation Value (HCV) Areas
- Pat Comer (NatureServe) Methods for Impact Analysis in Regional vs. Local Landscapes
- Jim Strittholt (Conservation Biology Institute)

(TRACK B) Biodiversity, Ecosystem Services, and Extractives

Chair: Anne Marie Fleury (ICMM)

Panel:

- Pippa Howard (Fauna & Flora International)
- Chris Scholl (Inmet)
- Gertjan Roseboom (Shell)
- Conrad Savy (Conservation International)
- Lori Anna Conzo (International Finance Corporation)

Key topics for discussion:

- What are the main challenges in applying IFC Performance Standard 6 in extractives projects?
- Is No Net Loss of biodiversity possible? And if so, what is required to achieve this?
- How has IFC Performance Standard 6 changed the way projects are planned and developed?

(TRACK C) Monitoring and Adaptive Management

Chair: Elizabeth Clarke (Zoological Society of London)

One of the major challenges for impact assessors is ensuring that recommendations for monitoring and environmental management are fit for purpose and responsive to changing conditions. This session will explore this topic in more depth and include practical examples of where and how this issue has been addressed.

Presentations:

- Leonardo Viana (ERM) Is Wildlife Rescue a Viable Impact Mitigation Strategy?
- Alvaro Camino (Independent Consultant) Adaptive Management of Bird and Bat Impacts in Wind Farm
 Developments
- Ray Hinkle (URS) Adaptive Management in Invasive Species Control
- Elizabeth Clarke/Mike Zrust (ZSL) –Monitoring and Management Tools to Facilitate Best Practice in Palm Oil Plantations

(TRACK D) InVEST Ecosystem Services Valuation Tool

Workshop: Lisa Mandle and Shan Ma

Learn about the Natural Capital Project's approach to and tools for incorporating ecosystem services in decision making, including an introduction to our InVEST (Integrated Valuation of Environmental Services and Tradeoffs) software. InVEST models have been used in more than 20 significant policy applications worldwide, from the establishment of water funds in Latin America to marine spatial planning in Belize.

14:15–14:30 Coffee Break

14:30 -16:00 Concurrent Session 6

(TRACK A) Key Biodiversity Areas: Contribute to the Development of a Global Standard

Workshop: Diego Juffe (IUCN)

Key biodiversity Areas (KBAs) are sites of global significance for biodiversity. IUCN is leading a global consultation to develop a standard to identify these sites. This workshop will provide participants an update on KBAs and seek their views on the applications and the challenges in using this standard in their daily practice.

(TRACK B) Aquatic Biodiversity and Ecological Flows

Chair: Joerg Hartmann (Independent Consultant)

Presentations:

- Joerg Hartmann Aquatic Offsets: The State of the Art
- Emmanuel Boulet (IDB)
- Peter Esselman (TBC) Ecological Flow Assessment of the Patuca River in Honduras
- **Anne McCarthy** (CSA Oceans Science Inc) Guiding Selection of Mitigation Metrics to Ensure Broad Recovery of Marine Ecosystem Services

(TRACK C) Payments for Ecosystem Services

It is session is proudly sponsored by URS.

Chair: Steve Smith (URS)

Payments for Ecosystem Services (PES) schemes involve payments to the managers of land or other natural resources in exchange for the provision of specified ecosystem services (or actions anticipated to deliver these services). Payments are made by the beneficiaries of the services in question, for example, individuals, communities, businesses or governments acting on behalf of various parties. PES schemes can be established at a range of scales from the global (e.g., Reducing Emissions from Deforestation and Degradation, REDD+) to the local (e.g., catchment-based schemes based on downstream water users paying for improved watershed management on upstream land). This session will explore the principles underpinning PES, introduce a series of case studies, and provide delegates with an opportunity to discuss the merits of promoting PES as a means to improve environmental protection.

- Dillon Ripley Lanius (Code REDD) Integrating Conservation Goals with National Development Priorities through REDD+
- **Chris White** (URS) Payments for Ecosystem Services: An Increasing Role in Environmental Protection in England?

(TRACK D) A Method to Assess Project impact and Dependence on Ecosystem Services

Workshop: Florence Landsberg

This workshop will introduce the Ecosystem Services Review for Impact Assessment (ESR for IA). Using a case study, the participants will use ESR for IA tools to identify and prioritize ecosystem services to be addressed in later stages of the ESIA process.

16:00-17:00 Closing Plenary

Poster Presentations

Monitoring and Biodiversity Conservation at the Areas of Sakhalin-2 Project Footprint Andreeva, Valentina

Challenges of the Arctic: Need for Multidisciplinary Technical Approaches for Assessment of Impacts to Biodiversity and Ecosystem Services Aronson, John

Sustainability of Hydropower Development in the Amazon *Bara. Pedro*

Impact Assessment and Monitoring as Opportunities for Long-term Ecological Research: Building a Case Study in the Sabor Hydroelectric System (NE Portugal) *Beja, Pedro*

Strengths and Weaknesses of Critical Habitat Quantification Techniques: A Case Study Review *Bol, Leslie; Northcott, Jason*

Evaluating Extractive Industry Impacts to Biodiversity: The Mitigation Hierarchy and Its Use in Minimizing Risks and Impacts to Biodiversity *Boucher, Jessica Lynch*

Developing a No Net Loss Biodiversity Mitigation Strategy for a Large-scale Linear Infrastructure Project: the BIM Tool *Butcher, Bill; Treweek, Jo*

Threat Assessment of Freshwater Ecosystems in the Brazilian Biomes

Ceotto, Paula; Bedê, Lucio; Pinheiro, Tiago; Ribeiro, Fernando; Scarano, Fabio

Applying Conservation Technology to Production Landscape Monitoring and Management Clarke, Elizabeth; Davies, Alasdair; Needham, Olivia; Zrust, Michal

IUCN Knowledge Products: Baselines for Impact Assessment

Cox, Neil; Cuttelod, Annabelle; Diego, Juffe; Rodriguez, Jon Paul

Pilot Study on Ecosystem Services to Business Sector: An Assessment for ESR Tool

da Silva, Frineia Rezende; Marin, Rafael; Canassa, David

Assessing the Predictive Ability of Ecological Niche Models Using Data from the North Slope of Alaska Escovar, Tatiana; Pearson, Richard

Assessing the Impact of Land-use Policies on Future Ecosystem Services Geneletti, Davide

Inter-American Development Bank Decision Support Platform (IDB-DSS) for Project Environmental Assessments

Grossman, Dennis; Villalba, Alberto; Hausman, Heidi

Ecosystem Services Identification and Maximization Analysis for the Kilombero Valley, Tanzania *Hernick, Charles*

REDD+ Baseline Information for the Caribbean Region of Colombia: Refining and Validating at Regional Scales *Hurtado-Moreno, Angela; Sarmiento López, Armando; González-Maya, José F.*

Assessing Important Biodiversity Areas in South Korea Jang, Hyojin; Lee, Gwangyu

The Economic Evaluation of Natural Capital: Focus on Forest Biodiversity in South Korea *Kim, Jung Teak; Kim, Joon-Soon*

Environmental Impact Assessment on Greenhouse Gases in South Korea Lee, Jonghwan; Kim, Joonsoon; Lee, Gwangyu

Assessing Important Biodiversity Areas in South Korea Lee, Minju; Lee, Gwangyu

Integrating Ecosystem Services into Development Planning (IES)

Lossack, Harald; Kosmus, Marina; Renner, Isabel; Ullrich, Silvia

The Government of Canada's Valuation of Ecosystem Services in Impact Assessment *Matejova, Miriam; Bourassa, Yves*

The Effectiveness of Utilizing a Wetland No Net Loss Principle in Environmental Impact Assessment *Narang, Darshanjit; Imran, Khan*

Maximizing Ecosystem Services in Danish Single-family Housing Areas *Nielsen, Mette Boye*

A GIS-based Approach to Assessment of Impacts on Biodiversity and Ecosystem Services Pang, Xi; Mörtberg, Ulla; Balfors, Berit

Use of Health Expertise in Ecosystem Service Reviews for Impact Assessments

Quiring, Sharon; Barron, Tania; Lagerloef, Kara; Cooper, Emily

Innovative Impact Assessment Framework to Minimize Any Potential Impact of Infrastructure Development on Sensitive Biodiversity and Ecosystem Services: The Case of the Relocation of Gramalote Town, Colombia Saenz, Leonardo; Bejarano, Patricia; Escovar, Tatiana; Arjona, Fabio; Rueda, Jose Vicente; Mulligan, Mark

Do REDD+ Safeguards Provide an Adequate Framework for Social and Biological Impact Assessment? *Schorse, Mary*



LATIN AMERICA AND THE CARIBBEAN: A BIODIVERSITY SUPERPOWER

- With only 16% of the planet's land, the region holds 40% of the world's biological diversity, a unique source of capital
- More than 30% of the Earth's available freshwater is found here
- 11 of the Earth's 14 terrestrial biomes are present in the region, providing countless services driving key productive sectors
- Agriculture, fisheries, forestry and tourism together represent 15% of the region's GDP

The Inter-American Development Bank has developed the **Biodiversity and Ecosystem Services Initiative** to leverage the region's natural advantage for the sustainable and inclusive development of the region by:

- Integrating the value of biodiversity and ecosystem services into key economic sectors
- Protecting priority regional ecosystems
- Supporting effective environmental governance and policy
- · Creating new sustainable development business opportunities

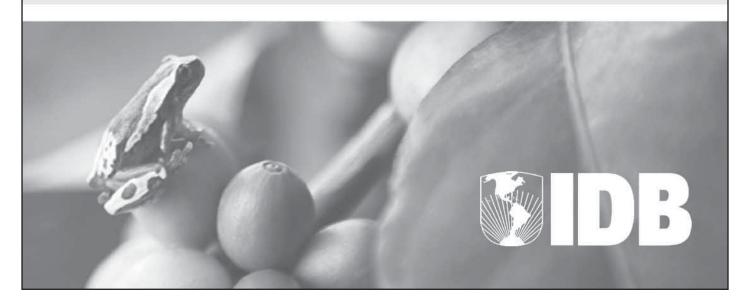
BIODIVERSITY FOR THE NEXT GENERATION

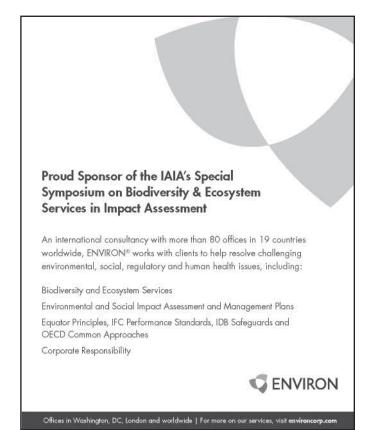
We invite you to join us at the upcoming IAIA Impact Assessment Conference: The Next Generation. We will further explore how to include biodiversity considerations in impact assessment with a focus on how Latin America and the Caribbean can maintain and enhance natural capital for development.

In addition to the IDB's sponsorship of the IAIA conference in Calgary, Alberta, Canada, 13-16 May 2013, we will contribute to the following events:

- Biodiversity Inclusive Environmental Assessment
- Tools to Predict Impacts of Economic Development Projects on Biodiversity

To learn more about biodiversity at the IDB, visit www.iadb.org/biodiversityLAC.







Conservation Biology Institute

Bridging Conservation Science and Practice

The Conservation Biology Institute provides scientific expertise to support the conservation & recovery of biological diversity in its natural state.

Our expertise includes GIS & decisionsupport tools, global forest conservation, landscape modeling, water, energy, & infrastructure development.

Services include:

- Conservation Assessment & Planning
 - Ecological Modeling
- Science Support & Education
- Conservation Dataset Development & Analysis
- Data Basin





www.databasin.org

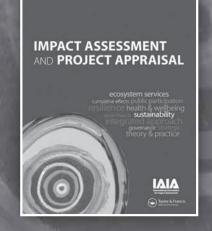
An innovative web tool that connects users with conservation datasets, tools, & expertise.

- Data Basin hosts thousands of reliable biological, physical, & socioeconomic datasets.
 - Innovative tools to help solve real world problems:
 - geographic search intersection analysis
 - visualization tools
 - analytical tools to address risk
 assessment, ecosystem monitoring,
 & climate change adaption
- Group workspaces, discussion forums, & messaging help users to connect & collaborate.



ALL IAIA MEMBERS GET AN ONLINE SUBSCRIPTION TO THE JOURNAL

IMPACT ASSESSMENT AND PROJECT APPRAISAL



CO-EDITORS:

Angus Morrison-Saunders, School of Environmental Science, Murdoch University, Western Australia

Francois Retief, School of Environmental Sciences and Development, North West University, South Africa Published quarterly, *Impact Assessment and Project Appraisal* has a broad focus covering but not limited to the following areas:

- Environmental and Social issues
- Health
- Sustainability
- Assessments of projects, programmes, plans and policies

IAPA is aimed at readers in universities, government and public agencies, consultancies, NGOs and community groups.

For more information, including IAIA membership, journal submissions and subscriptions, Editorial Board details and free downloads, visit:

WWW.TANDFONLINE.COM/R/IAPA



www.iaia.org

Biodiversity and Ecosystem Services in Impact Assessment

Special Symposium Washington, DC 7-8 February 2013





Silver Sponsor

Gold Sponsors

📢 ENVIRON

Bronze Sponsors

URS

AATA International, Inc.



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 2,500 and reside in over 120 countries. 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: IAIA provides an international forum for advancing innovation and communication of best practice in all forms of impact assessment 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.

International Association for Impact Assessment Headquarters 1330 23rd Street South, Suite C, Fargo, ND 58103-3705 USA | Phone +1.701.297.7908 | www.iaia.org

No piecemeal solution is going to prevent the collapse of whole societies and ecosystems ... a radical re-thinking of our values, priorities and political systems is urgent.

– Maude Barlow

Symposium planning committee

Orlando Venn, IAIA Biodiversity Section Co-Coordinator Elizabeth Clarke, IAIA Biodiversity Section Co-Coordinator Courtney Lowrance, IAIA Biodiversity Section Member Dennis Grossman, IAIA Biodiversity Section Member

