Biodiversity & Ecosystem Services in Impact Assessment

Special Symposium organized by the IAIA Biodiversity & Ecology Section

7-8 February 2013 | Inter-American Development Bank | Washington , D.C.

Background on IAIA and Symposium

- IAIA is the International Association of Impact Assessment (http://www.iaia.org)
- Anyone can join IAIA, and members with mutual interests share experiences and discuss ideas within IAIA Sections
  - The Biodiversity and Ecology (BES) Section is currently chaired by Elizabeth Clarke (ZSL) and Orlando Venn (Treweek Consultants), both BBOP members
- Following the 2012 IAIA conference in Portugal, the BES Section proposed the first Special Symposium on Biodiversity and Ecosystem Services
  - This was the second Special Symposium for IAIA with the first one focused on Climate Change in 2010
- **Key objective:** break down silos between conservation community, consultants, and private sector companies

Overview of Participation

- Symposium registration met full capacity with 220 people in attendance
- Global attendance from 28 countries
- Sectors represented included
  - ✓ 30% NGOs, including inter-governmental organizations (e.g. IUCN, UNESCO, UNDP, UNEP WCMC)
  - ✓ 30% Consultants (e.g. AATA, Hatch, URS, AMEC, Golder)
  - ✓ 14% Financial Institutions (e.g. IFC, IDB, USEXIM, Export Development Canada, Citi)
  - ✓ 14% Companies (e.g. CropLife, Holcim, Rio Tinto, Barrick, Inmet, Shell, Exxon, Chevron, Eni)
  - ✓ 8% Universities and 5% Government

Symposium Programme Overview

- Two plenaries
- Six concurrent sessions with a mix of formats (presentations, panels, and workshops)

Track A: Tools, Methods, and Information Resources

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

Track C: Policy, Planning, and Management

Track D: Computer Lab Workshops

IA and the Landscape Approach

Speaker: Bruce McKenney (The Nature Conservancy)

Key Points

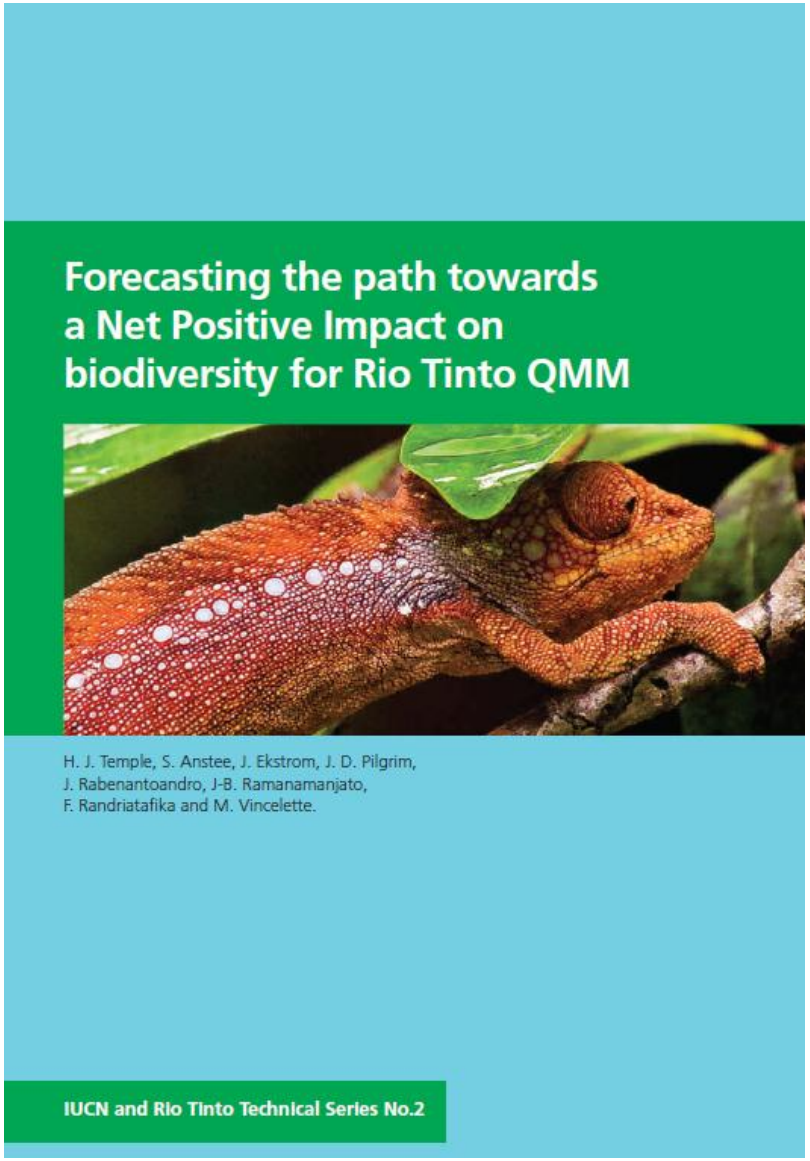
- Key problems with mitigation are improper ecological scale, reactive piecemeal planning, lack of defined outcome
- We can apply lessons learned in past development (e.g. oil & gas leases in Wyoming) to current development challenges (e.g. increasing mining leases in Mongolia)

Net Positive Impact and Offset Design

Session participants: Ray Victurine (WCS), Jon Ekstrom (The Biodiversity Consultancy), Jared Hardner (HGA), Francisco Dallmeier (Smithsonian Institute)

<u>NPI Forecasting – Key Points</u>

- New technique for most IA practitioners
- First piloted in Madagascar for the Rio Tinto QMM project
- Each biodiversity feature has a separate accounting line to predict impacts over time
- Once reliable data is acquired, forecasting can be done in 2-3 weeks

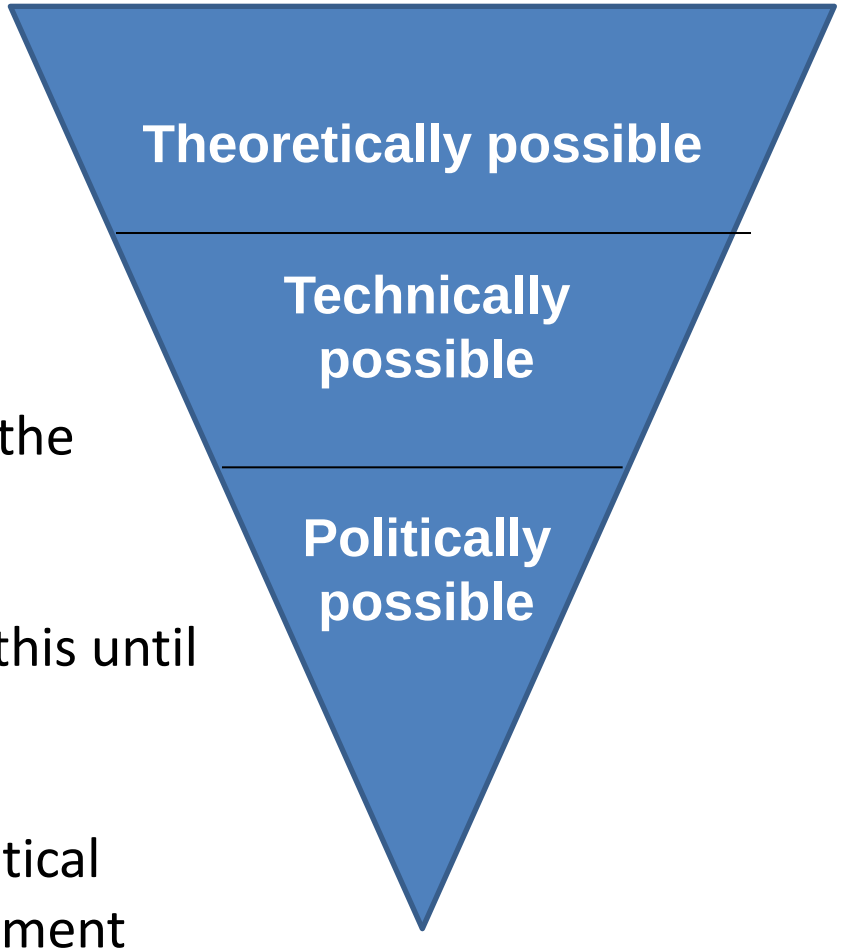


Net Positive Impact and Offset Design

Offset Feasibility Funnel: an analysis tool to evaluate options

<u>Discussion Points:</u>

- The fewest number of options will be politically feasible
- Need to engage government early in the offset design process
- Companies are often reluctant to do this until lender requirements are agreed
- However, lenders need to ensure political feasibility before finalizing loan agreement



Track A: Tools, Methods, and Information Resources

Session 1: Baselines and Data Collection (Presentations)

Session 2: Biodiversity Databases and Tools (Presentations)

Session 3: Biodiversity Risk Assessment and Conservation Priorities: Identifying Biodiversity Values (Presentations)

Session 4: Indirect and Cumulative Impact Assessment (Presentations)

Session 5: GIS and Landscape Analysis (Presentations)

Session 6: Key Biodiversity Areas: Contribute to the Development of a Global Standard (Workshop)

Baselines and Data Collection

Session participants: Reed Huppman (Environ), Jared Hardner (HGA), Jason Wiley (ERM), and Robert Langstroth (Environ)

Challenges

- Timing constraints of project schedules and financing processes
- Data limitations and uncertainties
- Lack of consistency among projects
- Staffing and budget limitations (i.e. cost-based consultant selection)
- Studies seen as a cost and not an investment
- Mistrust of 'environmentalists'
- Reluctance to consult and disclose

Recommendations

- Single clear standard among lenders for biodiversity inclusive EIA and monitoring
- Require scoping studies
- Centralized data portals and warehouses
- Certification and training of biodiversity consultants
- Independent critical habitats review panel

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

Session 1: Biodiversity and Ecosystem Services (BES) and Infrastructure (Presentations)

Session 2: BES and Agriculture (Panel)

Session 3: BES and Energy (Presentations)

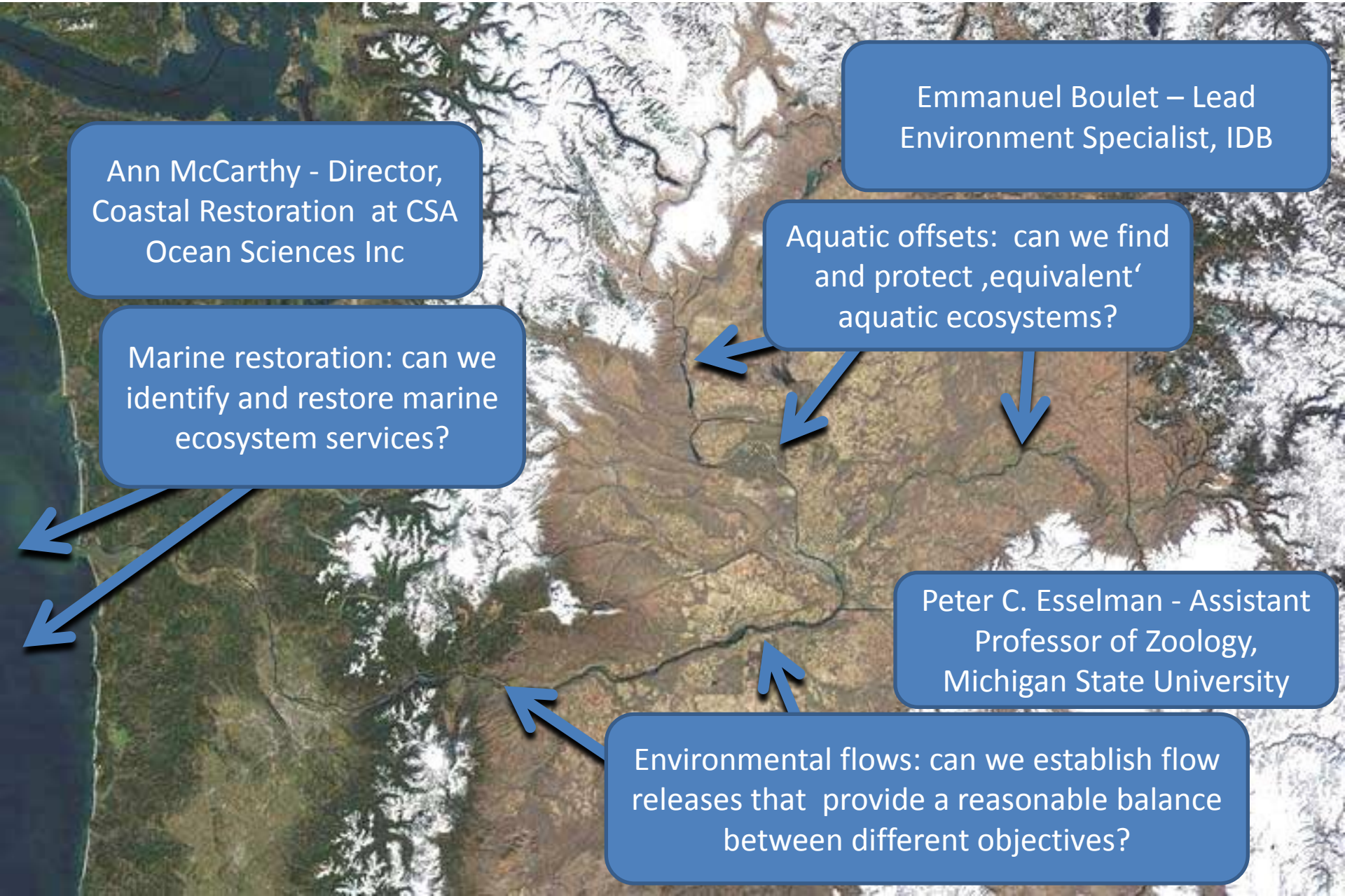
Session 4: Critical Habitat Assessment and IFC Performance Standard 6 (Presentations)

Session 5: BES and Extractives (Panel)

Session 6: Aquatic Biodiversity and Ecological Flows (Presentations)

Aquatic Biodiversity and Ecological Flows

Slide by Joerg Hartmann (independent consultant)



Aquatic Biodiversity and Ecological Flows

Challenges

- How to assess equivalence and no net loss?
  - ❖ Aquatic systems generally non-linear
  - ❖ Ha may not be the most relevant measure unit for aquatic habitat
- How to determine level of protection (in freshwater) to be achieved?
  - ❖ Intact river?
  - ❖ Free flowing river?
  - ❖ River vs. Watershed Protection?
  - ❖ Habitat restoration?

Recommendations

- Set specific mitigation goals with more emphasis on ecosystem function over area
- Evaluate meaningful parameters over the appropriate time scale
  - ❖ Short term metrics (e.g. survivorship)
  - ❖ long term metrics (e.g. diversity)
  - ❖ Rugosity (i.e. measurement of surface complexity and an indicator of habitat availability for sheltering and foraging)
- Reduce collection of data for metrics with no targets (i.e. invertebrate counts)
- Adjust frequency of data collection to match anticipated change

Track C: Policy, Planning and Management

Session 1: Integrating Biodiversity and Ecosystem Services (BES) into Planning and Regional Strategies (Presentations)

Session 2: ID and Valuation of Ecosystem Services (Panel)

Session 3: Front Loading Biodiversity Action Plans (Workshop)

Session 4: Engaging Communities on BES (Presentations)

Session 5: Monitoring and Adaptive Management (Presentations)

Session 6: Payments for Ecosystem Services (Workshop)

Monitoring and Adaptive Management

Challenges

- Long-term success dependent on appropriate monitoring and adaptive management
- Poor initial assessments result in monitoring and management plans that are not fit for purpose
- Species and habitats are dynamic and conditions change
- Management response ill-informed and ineffective

Recommendations

- Start with a robust and appropriate baseline
  - ❖ Take in to account changing conditions – requires sufficient science
- Monitoring and evaluation must inform management response
  - ❖ Standardised methodologies and tools are emerging to assist in this process
  - ❖ Integrated within Environmental Management Plan and plan is reviewed for changes
- Ensure indicators cover risk of change and align with wider landscape goals

Track D: Computer Workshops

Session 1: Integrated Biodiversity Assessment Tool (IBAT)

Session 2: NatureServe Tools

Session 3: Exploring Two Approaches to Ecosystem Services Valuation (Ecometrix and LEFT)

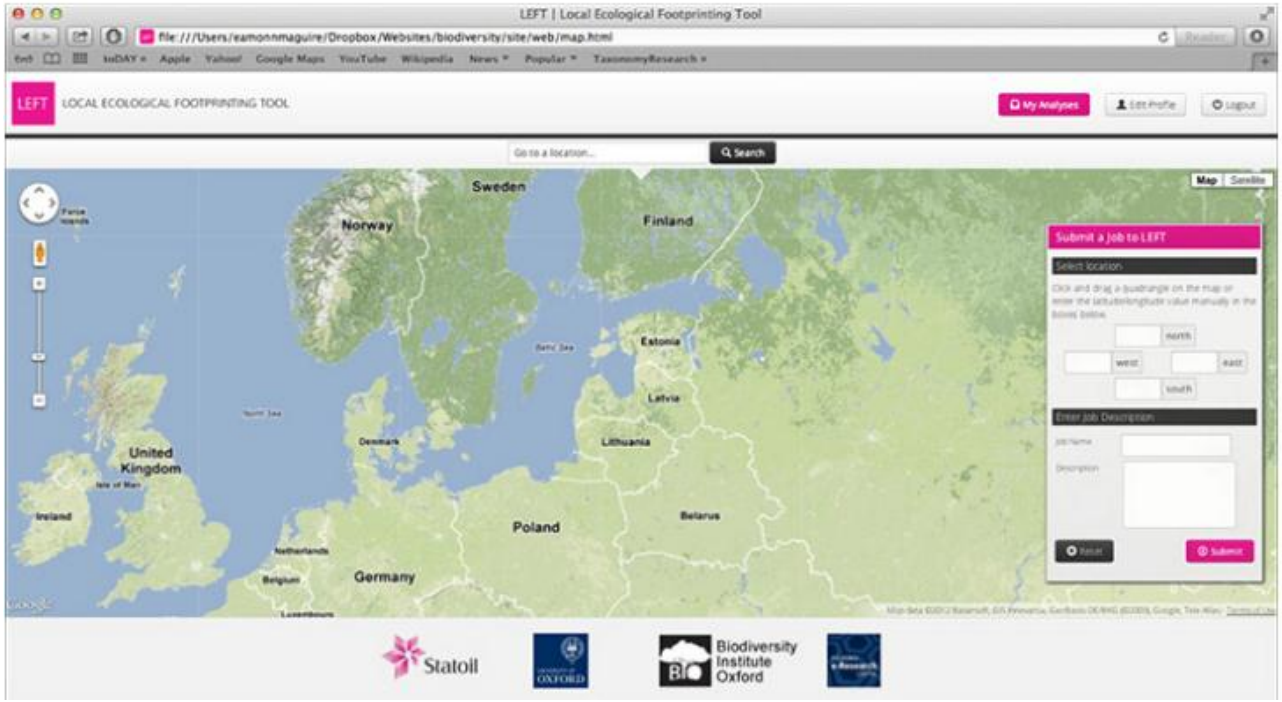
Session 4: Databasin Environmental Assessment Tool

Session 5: InVest Ecosystem Services Valuation Tool

Session 6: A Method to Assess Project Impact and Dependence on Ecosystem Services (WRI/ WBCSD)

Local Ecological Footprinting Tool

- Mapping ecological important landscapes beyond protected areas
- Globally available web-based databases and models to provide an ecological score based on:
  - Biodiversity
  - Fragmentation
  - Threat
  - Connectivity
  - Resilience



Closing Plenary: Recommendations for the Future

1. Break down silos between academia, NGOs, government, consultants, and private sector companies

    - Link IAIA to Society of Conservation Biology
    - In future symposia, include more on species-specific impacts and mitigation innovation
    - Bring agribusiness to the table
    - Link up biodiversity experts and social specialists

2. Expand guidance on biodiversity mitigation and management to aquatic ecosystems

3. Facilitate greater discussion about the linkages between climate change and biodiversity/ ecosystem services issues

4. Provide more guidance on adaptive management, including triggers and thresholds, indicators, proxies, and surrogates