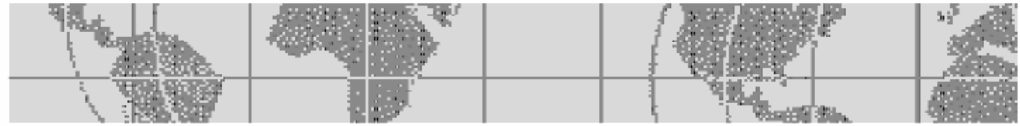


Effective Environmental Impact Assessment: Good practices, Methods and Processes

**Peter Leonard, Past President
International Association for Impact Assessment (IAIA)**

**United Nations Symposium on Hydropower
and Sustainable Development**

**Beijing China
October 27-29, 2004**



Effective Environmental Impact Assessment: Good practices, Methods and Processes

**Peter Leonard
Past President**

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Overview of the International Association for Impact Assessment

- **Founded 25 years ago**
 - **Over 2,700 members in 103 countries**
 - **Mission = Good practice in IA**
 - **Annual conferences, other events, publications, ...**
 - **Considered leading international authority IA**
-



Overview of the International Association for Impact Assessment

- **Ongoing capacity development initiatives**
 - *SEPA/WB/IAIA impact assessment training*
 - *IAIA Dutch Biodiversity & impact assessment program*
 - **First International Conference on EIA in China**
Hainan December 2004 , SEPA (State Environment Protection Agency of China) , IAIA, ...
-



Recent Trends and Developments in IA

- **Strategic Environmental Assessments (SEA)**
 - **Environmental & Social Assessments (ESA)**
 - **Sustainability Assessments (SA)**
 - **Integrated Assessments (IA)**
 - **Environmental Management (EMS)**
-



Recent Trends and Developments in IA

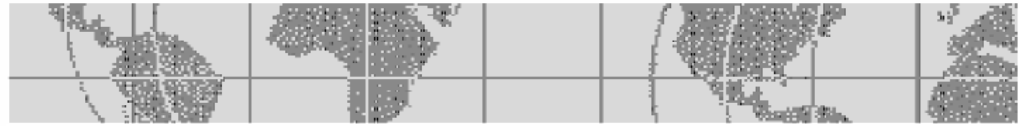
Drivers of ongoing shifts:

- **Global environmental issues**
 - **Main-streaming the environment**
 - **Up-streaming the environment**
 - **Compliance: Effective implementation EM**
 - **MDG (Millennium Development Goals)**
 - *Poverty eradication*
 - *WSSD Plan of implementation*
-



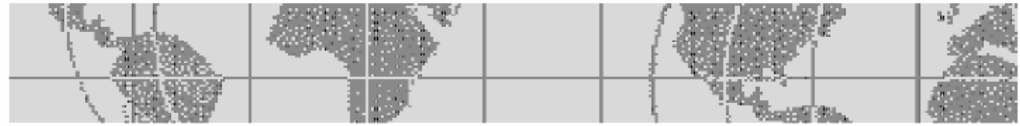
Examples of Environmental Impacts

- **Modified hydrology**
- **Water quality**
- **Erosion**
- **Sedimentation**
- **Organic matter decomposition**
- **Ecology river / reservoir/ watershed**
- **Aquatic habitats**
- **Semi-aquatic, riperean habitats**
- **Vegetation & river banks ecosystems**



EIA Process

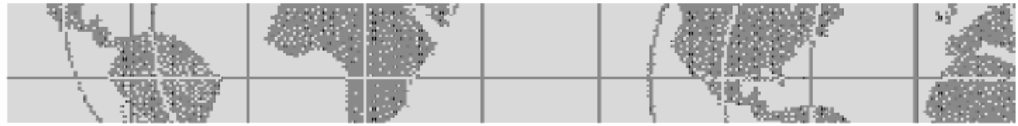
- **Screening**
 - **Scoping**
 - **Data collection/Data baseline**
 - **Impact Prediction**
 - **Environmental Management Plan (EMP)**
 - **Public Participation**
 - **Community Development Plan (CDP)**
 - **Alternatives**
-



Basic EIA Process

135 countries EIA laws and regulations
Essential components in sequence:

- 1. Screening**
 - 2. Scoping**
 - 3. Data collection / Baseline data**
 - 4. Impact prediction**
-



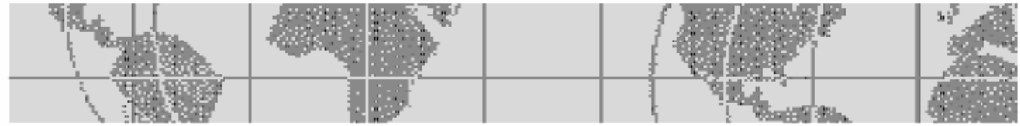
Basic EIA Process (cont'd)

5. Environmental Management Plan (EMP)

- *Mitigation/compensation & other measures*
- *Monitoring program*
- *Implementation & compliance*

6. Public consultation

- *Information / disclosure*
 - *Participation / Involvement of stakeholders*
-



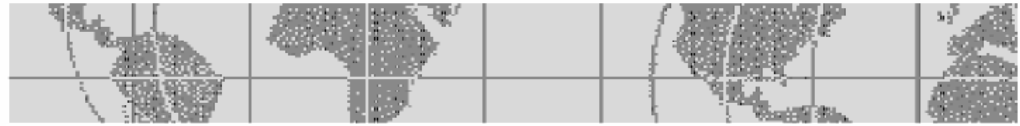
EIA Process: Emerging components

7. Community Development Plan (CDP)

- *Measures to alleviate adverse effects*
- *Measures to insure positive impacts*

8. Alternatives assessment

- *Option less impact*
 - *Project Design*
-



EIA Methodologies

Enormous variety – multiplicity of methods

- **EIA Recent & Multidisciplinary field**
 - *Biologists, chemists, hydrologist, geologists, engineers, agronomists, geographers,...*
 - **Different methods - common the EIA Process**
 - *IA methods : no consensus other than scientific i.e. replicable*
 - *Too often methodologies remain qualitative and descriptive*
-



EIA Methodologies

**Good practice is defining
a core set of methods**

Background needs:

- **Increase effectiveness**
 - **Enhance quality**
 - **Adapt EIA to developing & transition countries**
 - **Contribute to the MDG**
-



To Have an Effective EIA

Good practice - recognized methodologies is not enough

Also requires:

- **Adequate Institutional Framework**
- **National and local capacity (development)**



Capacity Development for IA

Why has success been very limited to date?

- **IAIA Marrakech Declaration on Capacity Development for IA (IAIA'2003)**
 - **Workshop in Marrakech in October to develop - Action Plan Capacity Development**
 - *Supported WB, Minister of environment of Morocco & Dutch Government*
 - *WB, UNEP, UNDP, DFID, USAID, IEPF, International experts, developing country representatives, ...*
-



Good Practice EIA

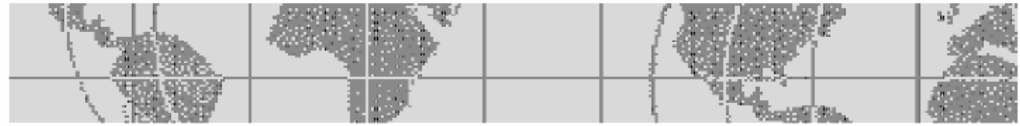
What are the basic and core components to build on after 30 years of experience?

- EIA is a process & a tool in the decision making process

Needs to be early enough in the decision making process to influence the outcome

Before the design is frozen

*Before the "specific project": SEA
(alternatives)*



Good Practice EIA

- EIA is a process & a tool in the decision making process (cont'd)

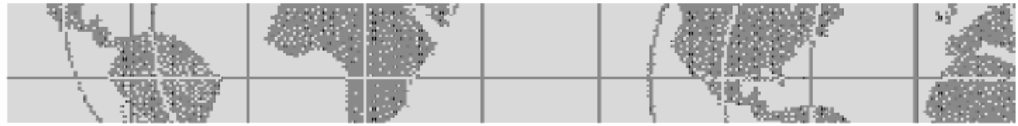
Integrated assessment where decision is based on the 3 pillars of Sustainability

Integrated watershed - basin management

- Although there are common & generic links, each project and country context is different

Hydropower projects are site specific

IA Must be adapted to context



Good Practice EIA

- Takes fully into account in a comprehensive manner the social and other types of impacts that linked to environmental effects

*Indirect impacts can be more important
Community impacts / benefits (CDP)*

- Provide the appropriate means for Public participation to those that are potentially affected – all legitimate stakeholders

*As early as possible in the process and
accountable of how PP integrated*



Good Practice EIA

- Agreement on / or establishment of the scope

*Through TOR or specific procedures
With Public Participation – outcome
agreement*

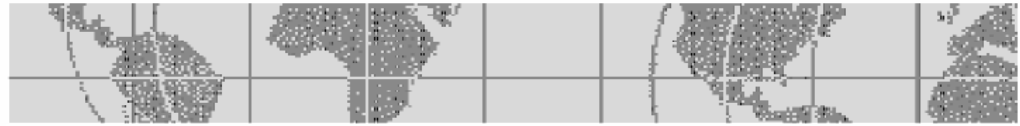
- Sufficient data availability to determine an
Environmental Baseline

*Not only for predictions but for
monitoring and compliance
Adaptive management result oriented
approaches*



Good Practice EIA

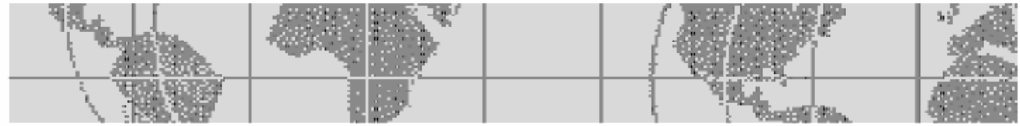
- Environmental Management Plan (EMP) is able to alleviate or manage in an acceptable manner the project adverse ecological effects
 1. *Through mitigation measures, compensation measures and – increasingly through **environmental benefits approaches and environmental management***



Good Practice EIA

2. Through better integration of Policy, Programs, Plans and Project Planning

- Biodiversity, desertification, deforestation, wetlands, ...*
 - Protected areas, rare, endangered and vulnerable species*
 - Integrated watershed management*
 - Habitat rehabilitation*
 - Ecological enhancement*
-



Good Practice EIA

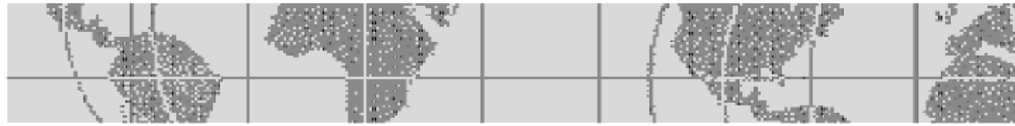
3. Through better implementation with compliance measures for verification and enforcement mechanisms

- During construction

- During operation

Audits – EMS

- Adaptive management practices



WWW.IAIA.ORG

- **Guidelines and principles of Impact Assessment**
- **Principles of EIA Best Practice**
- **Strategic Environmental Assessment Performance Criteria**
- **Principles of Social Impact Assessment**