

Linear Infrastructure and Migratory Species: the role of impact assessment and landscape approaches

UNEP/CMS/ScC-SC5/Inf.3

Roel Slootweg



Infrastructure: demarcation of concept

- Infrastructure covers: the sectors energy, transport, water, cities and digitalization
- Includes:
 - point infra = hubs or nodes: (air)ports, industries, distribution centres, urban areas,..
 - linear infra = needed to connect hubs
- For migratory species, focus on linear, including:
 - roads, railways, waterways, pipelines, power lines, information cables and associated infrastructure such as fencing
 - but also obstructive “points” on migration routes such as wind turbine parks, dams or reservoirs
 - Interesting issue: can marine shipping lanes be considered infrastructure? They do interfere with whale migration corridors.
- From policy to plan to project:
 - economic corridor (abstract; supply and demand),
 - routing corridors (geographic zonation),
 - traject alternatives (physical location)

Effects of linear infrastructure

Direct:

- habitat loss,
- fragmentation and isolation,
- barrier effects,
- altering of natural processes (e.g. hydrology, erosion /sedimentation, fire, invasive species).

Indirect:

Intended or unintended consequences (e.g. settlement, hunting or logging in formerly inaccessible areas, spread of diseases).

Area of impact:

‘Effect zone’ parallel to the project is too narrow for migratory species. Wildlife migration connects areas far away from each other by air, land and water connections.

The momentum: “*Use it or lose it*”

- Estimates of annual global infrastructure investment needs range from \$3 trillion to \$7 trillion
- 2010 – 2050
 - 60 % increase in global road infrastructure
 - Doubling of railway tracks = 335,000 kilometres
 - infrastructure investments will surpass the total current stock
- Given the long lifespan of such investments, projects must not only avoid negative impacts (*‘do no harm’*), but have to be low-emission, resilient, sustainable and circular (*‘do good’*)

The next decade is a ‘use it or lose it’ moment in economic history

National Reporting for COP 13

- Very limited level of detail; only mentioning of issues.
- Silo approach: focus on “green” activities (conservation; protected areas)
- Impact Assessment applies to other sectors (transport, energy, water, etc.), so beyond the reporters’ horizon.
- Mention of EIA (= 35%) and SEA (= 11%) as useful tools for MS
- Mitigation hierarchy: only mitigation and compensation, nothing on avoidance, the most important priority step in the hierarchy
- 20% report on infrastructure, mostly wind turbines (related to CMS initiative of the Energy Task Force)
- Nothing on linear infrastructure !
- Citizen science / public data portals important recent development.

Suggested actions on National Reports

- Disclaimer: National Report may not be the appropriate instrument for deeper insights; it only points to Parties with relevant experience.
- Questions (10) suggested for a new sub-section Impact Assessment in section VI: 'Mainstreaming Migratory Species in other sectors and processes.'
- For each question the topic, a motivation, and the relation to the present format is provided.

Fundamental steps in ESIA:

Screening:

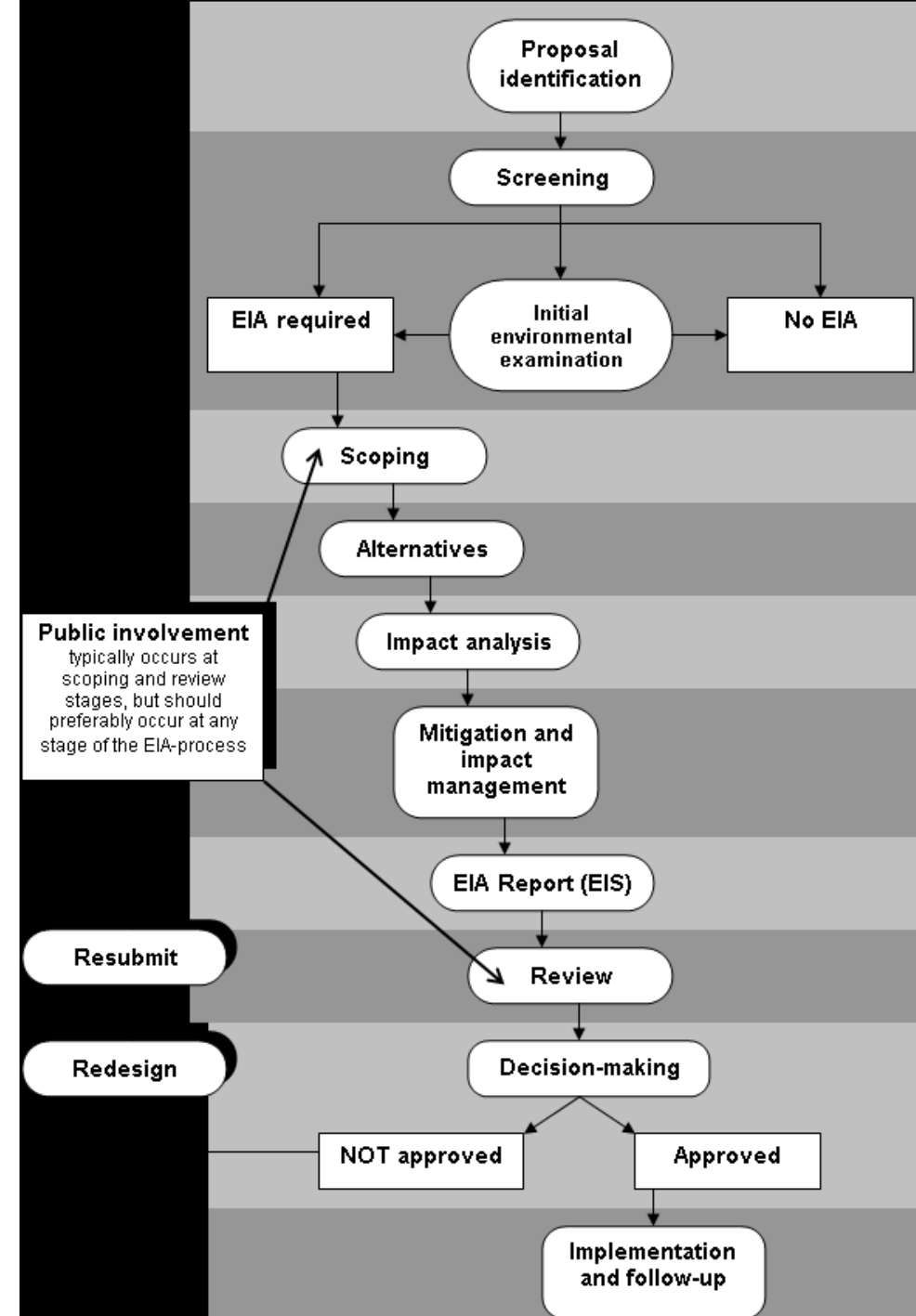
Defines when an ESIA is legally required.

- Gov't responsibility
- *M.S. screening criteria and guidance?*

Scoping:

Defines the issues to be studied; best practice requires public involvement during scoping. Information on

- Responsibility of proponent; gov't does quality check.
- *Identification of MS issues; alternatives; methodology; available data?*



Levels of decision making : ESIA is too late

National (sector) policy

- National energy or transport policy, making fundamental choices on transport modes or energy mix which *de facto* defines the infrastructure

Plan definition

- Defines infrastructure needs within broadly defined corridors (not necessarily geographically defined).

Programme definition

- investment programmes for an area and/or sector, including the identification of alternative routings of linear infrastructure

Project definition and implementation => ESIA + ESMP

- Exact project design, ESIA mostly limited to mitigation measures.
- ESIA cannot address cumulative impacts of multiple projects.

! SEA can address higher decision levels and introduce / assess meaningful alternatives at all levels.

Available Standards and Guidelines

Best practice guidance

- Mitigation knowledge well-developed (e.g. road ecology): do not re-invent the wheel.
- Yet, too much focus on mitigation: need for “upstreaming” towards spatial and sectoral planning.

Sector guidance:

- Good work for biodiversity in hydropower, mining and energy. MS adressed in generic terms of fish, birds, terrestrial animals. Similar for IAIA guidance.

Landscape approaches

Fashion concept, with lots of confusion:

- Working at landscape scale only, defined by biophysical boundaries
- Sectoral landscape approach: sectoral focus but in response to social or environmental challenges incorporating broader objectives
- Integrated landscape approach: addressing multi-sector, socio-ecological landscapes in a highly participatory manner.
- To be effective a landscape approach should be linked to a formal planning process (e.g. spatial or sector plan). SEA is designed for participatory, informed and transparent decision making in a formalized environment.

General conclusions

- Legal and procedural instruments to take migratory species into consideration are in place.
- Attention to MS is rather minimal, but 'hooks' to flag MS issues are there.
- Relevant knowledge is available but dispersed. Available scientific information needs to be 'mainstreamed' for general use
- Mitigation => avoidance => improvement. A real transition needs a higher level of ambition, from *doing-no-harm* to *doing-good*.
- Mainstreaming MS by upstreaming: EIA avoids negative impacts (do no harm), SEA can be used to start thinking in terms of enhancement (do good)
- Look beyond the migratory species agenda; be "on board" in the world of big plans, policies and money.

Recommendation on migratory species in Impact Assessment

Make MS visible in national ESIA and SEA regulations :

Develop screening guidance for migratory species

- Focussed on migratory pathways / mechanisms for groups of species (air, land, water)?
- More emphasis on spatial and temporal aspects of migratory species.
- Priority: Range States for Appendix 1 species?

Develop scoping guidance and information requirements on migratory species for ESIA and SEA

- what kind of data is needed at what level of decision making?

Suggested actions

On IFI's:

- Guidance on how to deal with MS + best practice + geographic information
- Link existing CMS documents to IFI-documentation and expand with more material (focus: continents, migratory pathway, species group??).
- Reflect status of CMS listed species in IFI safeguards.

On Standards and Guidelines:

- Information on migration requirements for defined (groups of) migratory species would be an add-on to existing guidance.
- Visibility of CMS outputs is too low!
- S-CMS should more pro-actively participate in global Infra initiatives

On landscape approaches:

- Promote SEA as a procedural vehicle to implement a landscape approach.