## Evaluating the effectiveness of EIA: Learning from research on its substantive outcomes

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## The Interminable Issue of Effectiveness

- Effectiveness is an overarching theme of the EIA literature.
- But a central paradox of EIA research is that effectiveness has only been partially addressed.
- Defining effectiveness:
  - Substantive criterion: does it achieve its purposes?
  - Procedural criterion: is it undertaken according to established expectations?





| Study                               | Contribution to the consent decision  | Contribution to project design  |
|-------------------------------------|---|---|
| Kobus and<br>Lee, 1993              | 0% 'very important'; 55% 'important'; no further data.  | 47% 'minor changes'; 11% 'major changes'; no further data.  |
| Sadler, 1996                        | 23% 'very influential'; 46% 'moderately influential'; 25% 'marginally influential'; 2% 'no influence'.  | Redesign of proposals: 14% 'very influential'; 42% 'moderately influential'; 32% 'marginally influential'; 8% 'no influence'.  Siting of proposals: 12% 'very influential'; 36% 'moderately influential'; 33% 'marginally influential'; 15% 'no influence'. |
| ten Heuvelhof<br>and Nauta,<br>1997 | Direct impact: 79% 'clear impact' (52% impact on development design and 68% impact on opinions); 21% no impact.  Indirect impact: 65% indirect impact; 35% no indirect impact.  Net beneficial impact: 14% 'large impact' 26% 'reasonable impact'; 30% 'small impact'; 30% 'no impact'. |   |
| Wood and<br>Jones, 1997             | 35% 'substantial' or 'considerable influence'; 26% 'some' or 'moderate influence'; 29% 'marginal influence'; 5% 'no influence'; 5% 'no comment'.  | 21% of projects modified before or after EIS published; 31% modified solely prior to EIS publication; 16% modified solely after EIS submission; 32% not modified.   |
| Gwilliam,<br>2002                   | 28% 'large influence'; 46% 'medium influence'; 24% (2%) 'small influence'; 2% (2%) 'no influence'.  | Not assessed.   |

## **Decision-Orientated EIA**

- EIA being used as a passive tool for provision of additional information.
- Needs of decision makers (e.g. information types and timing) have received minimal attention.
- EIA process, procedures and methods based on a largely uncritical application of one decision theory.
- Research literature dominated by "environmental assessment practitioners communicating amongst themselves" (Nitz & Brown, 2001).





## **EIA-Orientated Decisions**

- Limited consideration given to institutional requirements when implementing legislative provisions for EIA.
- Few decision makers read entire EIS:
  - Shorter more concise EISs or improved resource allocation for decision makers?
- Image management: EIA as a positive, dynamic and creative tool for environmental management.



