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- Integrated EHIA -

R. Fehr, LÖGD Bielefeld

- Context & examples
- Policies, programs
- Criteria, methodology
- Data & tools
- Current practice
- Conclusions

1. Context and examples

- Pollution, noise, vibrations, EMF, injuries, dangerous goods, exercise, quality of life
- Integrated assessment, hazards and benefits

EHIA Examples

- Manchester airport, UK
- Tunnel of Somport, F
- Motorway Livorno - Civitavecchia, I
- Autobahn A 20, D
- City bypass Krefeld, D
- Schiphol airport, NL

2. Policies, programs

- 1970 NEPA
- 1985 CEC
- 1989 European Charta
- 1992 Treaty of Maastricht
- 1992 *Agenda 21*
- 1993 WHO-HFA 19
- 1993 EU 5th Env. Progr.
- 1994 Eur. EH Action Plan
- 1995 CET
- 1997 UN-ECE T&E

3. Criteria, methodology

Classification criteria

- Expos./outcome-based
- Single factors, scenarios
- Point-estim., probabil.
- Legal framework

Quality criteria

- Transparency
- Objectivity
- Model validity
- Integration

EHIA Approaches

- 1987 WHO: Health & safety component of EIA
- 1987/90 FEARO, CPHA: Health aspects of EIA
- 1989 EPA: QRA
- 1989 VROM: Gezond-heidseffectrapportage
- 1992 ATSDR: PHA
- 1992 CAPCOA: HRA
- 1992 GMK:10step model
- 1993 Australia: EHIA
- 1995 NZPH : HIA

Methodology, key elements

- Status quo assessment
- Predictions, modelling
- Integration
- Interpretation, judge-ment
- Communication
- Evaluation

Integration

Combination and integration of:

- Exposure & dose-response information
- (Noxious) agents
- Environmental media, exposure pathways
- Health effects
- Hazards and benefits

4. Data & tools

Data

- Monitoring, inventories, catasters, surveys
- Epidemiologic studies
- Animal toxicity studies

Tools

- Inquiry systems
- Data warehouses
- Mathematical models
- GIS, visualization

5. Current practice

Schiphol airport, NL

- Risk evaluation
- Geographical study
- Survey on risk perception & annoyance

EIS Survey, D

Majority of 51 EIS with limited or missing coverage of human health

PENELOPE network

www.penelope.uni-bremen.de

Study	Web pages	Hits "health"	Hits "noise"
F: Somport	5	0	0
D: A 20	10	0	2
I: Livorno	3	0	0
UK: Manch.	16	0	5
Sum	34	0	7

Little evidence for high prevalence of integrated EHIA

Current limitations

...of scientific knowledge:

low exposures, multiple pathways, interactions, long-term effects, well-being, health benefits, uncertainty vs. variation

...of implementation:

lack of consensus on EHIA concept & standards, focus on "acceptability"

6. Conclusions

- Current EHIA approaches ready to be applied
- Inter-disciplinary cooperation incl. Public Health needs to be fostered
- From "acceptable burden" to "alternatives assessment"
- Systematic post-project evaluation

EHIA initiative

- Status quo analysis
- Best use of existing data & methods
- Guidelines
- Linkage with surveil-lance systems
- Visualization
- Evaluation
- Adequate training

EHIA seems to be indispensable

as a transparent and rational basis

for transport planning and policy-making

10-step model

1. Project analysis
2. Regional analysis
3. Population analysis
4. Background situation
5. Prognosis of burden
6. Health impact prognosis
7. Summary assessment
8. Recommendations
9. Communication
10. Evaluation

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