

HIA Effectiveness: the case of the Geneva International Airport development plan

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Health Impact Assessment (HIA) institutionalization and multisectoral collaboration in Europe

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Background

- Urban airport (4 km from Geneva city centre) on a national border (Switzerland-France)
- Continuous growth of the airport over the past 30 years and a development plan seeking to pursue this trend:
 - 2015: 15 million passengers, 180'000 takeoffs/landings
 - 2030: 25 million passengers, 235'000 takeoffs/landings
- HIA (Sept. 2015 – Oct. 2016) of GA development plan commissioned by the association of municipalities affected by the airport (AMAA) and the Geneva cantonal government



The HIA in a nutshell

- Assessment consortium: Universities of Geneva and Basel, Federal Institute of Technology ETHZ (EMPA Laboratory, noise modelling), equiterre (NGO), consultancy companies (Ecoplan - economic impacts; MIS Trend-surveys)
- Steering group: representatives of canton Geneva (4), association of affected municipalities (2) and other municipalities (2)

The HIA in a nutshell

- Focus on air pollution, noise, socio-economic impacts, quality of life
- Methodology:
 - 2 scenarios (current-2014 and 2030)
 - Quantitative:
 - Population approach: risk assessment (air pollution, noise), noise index
 - Cost approach (monetisation)
 - Individual approach: survey regarding quality of life (750 people, Switz. + France)
 - Literature approach: jobs/revenues and health

The HIA in a nutshell – mortality and health costs

- Total Health Costs (THC) : 52 Mil (2014) → 84 Mil (2030) ; + 62%
- Air pollution : + 114% ; Noise : + 15%
- Air pollution contribution to THC : 48% (2014) → 63% (2030)
- NO₂ mortality : 21 (2014) → 42 (2030) ;
NO₂ YLLs : 253 (2014) → 460 (2030)
- Airport-related contribution to total air pollution mortality in Geneva: 9%
- 2014 air pollution costs: 24.7 million CHF (approx. 23 million Euro).
Focus area : 83% ; Switz: 94%
- 2030 air pollution costs: 53 million CHF (approx. 50 million Euro)

The HIA in a nutshell – the survey

NOISE & SMELL ANNOYANCE : *the more a person lives in an area impacted by aeroplane noise (based on 2014 data) the more one tends significantly to declare :*

- living in a noisy environment
- being disturbed by noise at home, day + night
- being disturbed by aeroplane noise, and more from aeroplane noise than from any other source
- being disturbed by noise at home during leisure time
- closing the windows because of noise, day + night
- closing the windows because of the smell (olfactory annoyance) at night, being disturbed by the smell of aeroplanes, and being more disturbed by the smell originating from aeroplanes than by smells from any other source

Methodology and materials

- Several conceptual frameworks for HIA effectiveness

Table 2
Three domains for evaluating HIAs (Parry and Kemm, 2005).

	Process criteria	Outcome criteria
Prediction	<ul style="list-style-type: none"> • Methods used for predictions • Methods for scoping • Baseline data collection • Use of checklists 	<ul style="list-style-type: none"> • Accuracy of predicted impacts
Participation	<ul style="list-style-type: none"> • Identification of differential impacts • Voice in decision-making and access to information • Knowledge gathering 	<ul style="list-style-type: none"> • Degree to which stakeholders felt involved in the decision-making process and felt ownership of the HIA's recommendations
Informing the decision-makers	<ul style="list-style-type: none"> • Involvement of professional and/or community stakeholders • Decision-makers engagement in the HIA • Timing of the HIA • Communication of the HIA's recommendations 	<ul style="list-style-type: none"> • Informing decision-making

Harris-Roxas & Harris, 2013:53

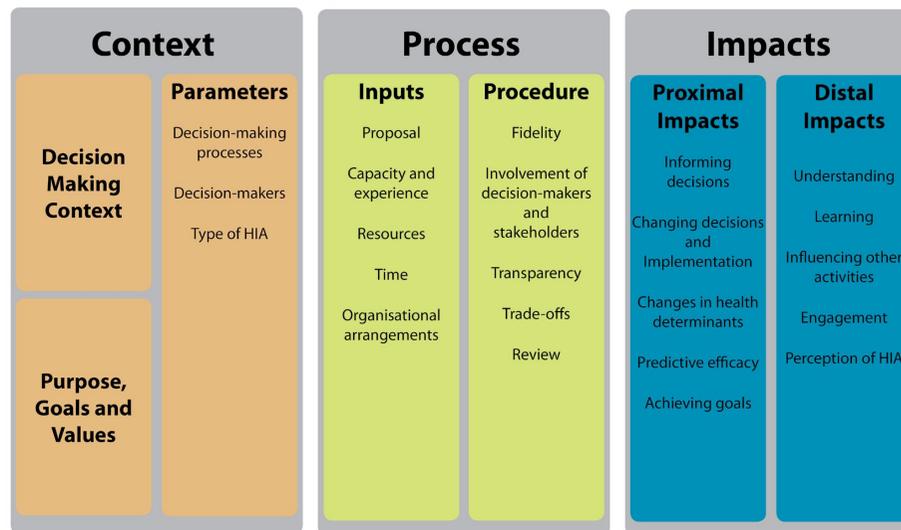
Table 2.3 Four types of effectiveness

		Modification of pending decisions according to health/equity/community aspects and inputs	
		Yes	No
Health/equity/ community adequately acknowledged	Yes	<i>Direct effectiveness</i> <ul style="list-style-type: none"> • HIA-related changes in the decision • due to the HIA the project was dropped • decision was postponed 	<i>General effectiveness</i> <ul style="list-style-type: none"> • reasons provided for not following HIA recommendations • health consequences are negligible or positive • HIA has raised awareness among policy-makers
	No	<i>Opportunistic effectiveness</i> <ul style="list-style-type: none"> • the decision would have been made anyway 	<i>No effectiveness</i> <ul style="list-style-type: none"> • the HIA was ignored • the HIA was dismissed

Wisnar et al, 2007:21

Methodology and materials

- Several conceptual frameworks for HIA effectiveness



Harris-Roxas & Harris, 2013:53

- Notes and observations (HIA process), semi-directive interviews

Effectiveness analysis – Context

- Airport development plan procedure: a focal point for tensions
 - Opposition between stakeholders: economic development of the region (economic circles, conservative parties) vs. quality of life (Green party and NGOs, housing needs and real estate taxes (AMAA))
 - Weak control of the development of the airport (i.e. *consultative* committee on noise pollution)
- An HIA for what purpose?
 - AMAA:
 - Put numbers on the health impacts narrative
 - Adding leverage so that local stakeholders can be heard by the cantonal and federal governments
 - Canton: - support (i.e. control) of the HIA process

Effectiveness analysis – Process

- Constraints: downsizing of the HIA budget and contraction of the timeframe (first results expected in a short period of time-3 months)
- The Canton's hidden agenda was disclosed during the presentation of the first results of the HIA: a cap on night-time (22:00-midnight) noise emissions to protect building rights within affected municipalities.
- Negotiation (fidelity, transparency, trade-offs) about methodological issues and focus areas.
- Involvement of decision-makers & stakeholders, ambivalent position of the Canton's representatives, absence of the airport managers.

Effectiveness analysis – Impacts

Proximal

- HIA recommendations support existing plans to reduce air pollution and suggest measures (which may not be implemented) to reduce noise exposure (i.e. reducing the airport's operating hours)
- Lack of support by Health Directorate to implement recommendations
- Strong leverage for advocacy against "uncontrolled" development of the airport
 - 24 Nov. 2019 popular vote at cantonal level: Initiative asking for a democratic steering of the airport's development vs. a counter-proposal put forward by the parliament of the Canton (*contre-projet direct*)

Distal

- Strengthening inter-sectoral cooperation at cantonal level
- Scoping stage as a shared learning process about health and its determinants
- Declared interest by the canton to conduct HIAs on other environmental health issues,

Lessons

- Addressing a highly conflictual topic such as the development of an urban airport requires both flexibility and an established and recognized framework.
- The HIA process faced considerable political and methodological challenges and constraints...
- Nevertheless, the use of a robust and rigorous HIA methodology ensured the consistency of the evaluation and contributed to its effectiveness

“The way is the goal”