

# Instructions for Evaluating Concepts in Terms of Health Impact Assessment and in Relation to Health 2020 (or Regional Health Policies)

geny

hluk

sociální kontakty, kouření, stres

sociální vyloučení, bydlení, klima

rasová nesnášenlivost, drogy, alkohol

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## **Introduction**

A healthy population is a basic requirement for development. One way to influence public health is to embed the requirement for protecting and supporting it in strategic documents (i.e. concepts, programmes etc., hereinafter "concepts") that will serve as a development guide in the coming years.

The Health Impact Assessment method (hereinafter "HIA") provides a way to take account of health in the policy, describe public health impacts, set up indicators, evaluate sources of health data, come up with monitoring tailored to the strategy, determine conditions for selecting projects and, most importantly, to modify the targets of the strategy in such a way that protecting and supporting public health is achieved through implementing a concept or policy. (1) The HIA methodology is also a tool in carrying out "Health 2020 – National Strategy for Health Protection and Promotion and Disease Prevention" (hereinafter "Health 2020"), and that is also why it should become an integral part of all development documents.

Therefore, this document is a guide for those carrying out HIA, HIA team members, concept authors and also for employees of Regional Public Health Authorities (hereinafter "RPHA") and the Ministry of Health of the Czech Republic and other institutions responsible for evaluating the concepts.

The authors would like to emphasize that like other methods, HIA is constantly developing and that when using this tool, the new HIA trends and available literature must be followed. At the same time, this guide should be adapted to the particular concept or program presented.

## **1 What is Health Impact Assessment**

Health Impact Assessment (HIA) is a way of identifying and increasing the positive effects and eliminating or at least mitigating the negative effects on the health of a population of any policy or other development documents. These are mainly those strategic documents the primary target of which is not improving health, i.e. non-health concepts. Concepts have their intended targets and impacts, but at the same time, they can also have unintended and unexpected impacts that can have positive or negative effects on the health of a population. (2) The aim of HIA is therefore to identify all impacts on health, be they positive or negative ones, and to minimise health risks. This includes evaluating different health impacts in different population groups.

## **2 Why carry out a Health Impact Assessment**

The World Health Organisation (WHO) defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". (3) For every individual, health is a basis for a quality life. Therefore concepts must be evaluated according to their health impacts. Moreover, the evaluation of a concept shows that its authors and initiators have taken its impact on a population into account. Such an evaluation also enhances the quality of the concept. At the same time, it makes the potential impacts decision-making more transparent.

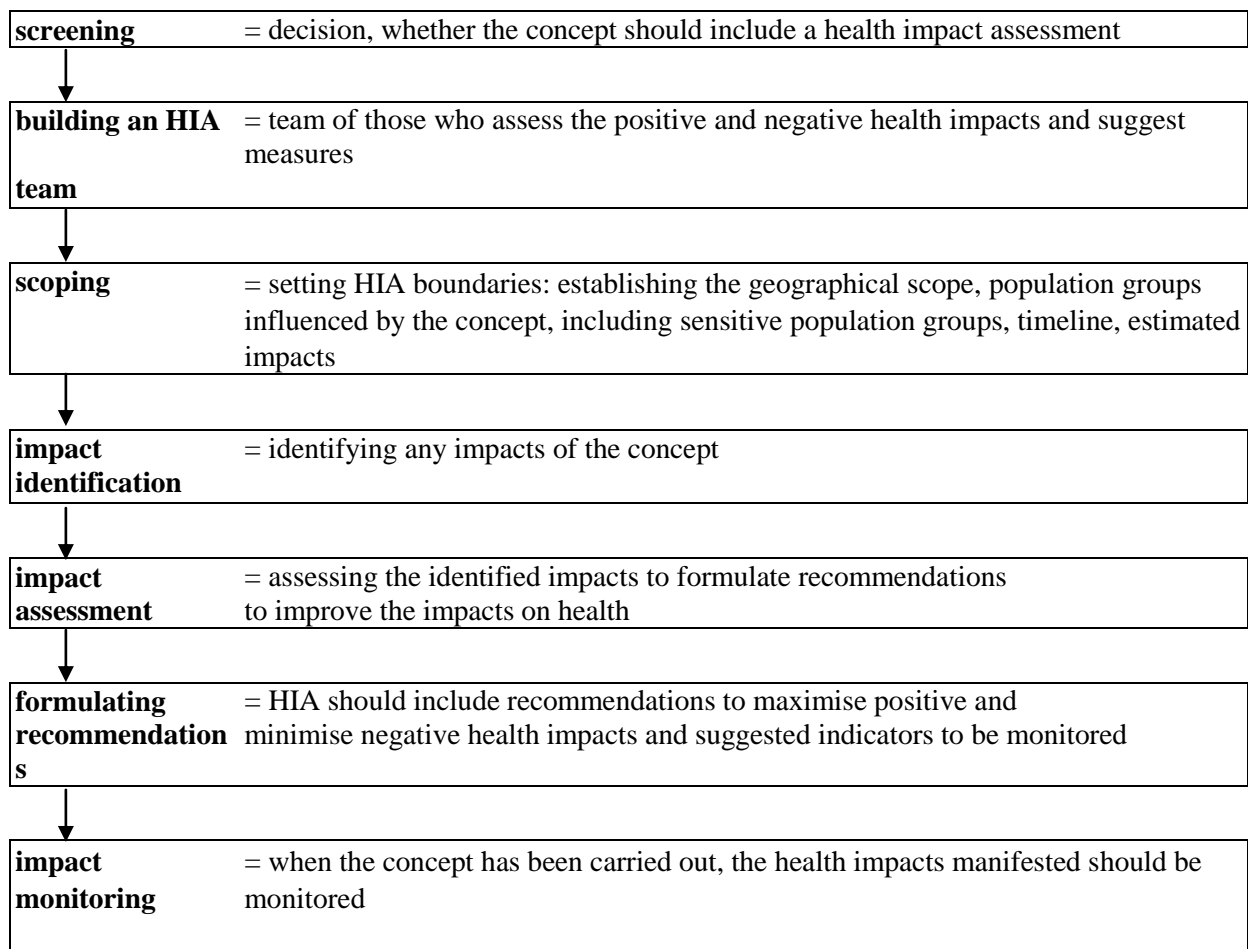
It is also necessary to emphasize that the aim of HIA is not only mitigating risks, but also enhancing the positive effects of a wide range of concepts. HIA also allows the indirect impacts on the health and well-being of a population to be assessed.

HIA evaluations mainly require inputs from specialists of different organisations with different opinions and views, which enriches the concept in the end. However, conflicts can arise when carrying

out the concept is beneficial for one group and disadvantageous for another group. HIA cannot remove the need for complicated and complex decisions, but it can make the health impacts of a concept significantly more transparent.

The timeline for carrying out HIA varies - it can be carried out at the same time as creating the concept (ex ante) or after preparing the concept (ex post). The most effective way is when HIA becomes part of the process of creating a development document from the very beginning. The aim of this prospective assessment is to prevent the negative impacts of the concept and enforce its positive impacts. In these cases, environmental impacts and health impacts are not assessed separately.

### Health Impact Assessment procedure



In practice, new information often arises during the concept assessment and the assessment procedure then returns to an earlier stage. For example, if when identifying the impact it is discovered that the population group is bigger than originally thought, the scoping must be repeated and the population group redefined. (2)

One of the steps is building an HIA team. Experience has shown that an HIA specialist undertaking this is not sufficient. Other members must be included in a team, as this is the only way to produce a document taking into account local knowledge, experience, perception of values and risks and to include all sensitive population groups, including minorities, potentially influenced by the concept.

### 3 How to carry out a Health Impact Assessment

#### 3.1 How to carry out screening

To decide whether HIA is necessary, possible health impacts have to be assessed rapidly and the scope and importance of the concept must be evaluated in terms of health impacts. The availability of sources for carrying out an assessment has to be evaluated as well.

One option is to use a check-list containing the questions below. The aim of the check-list is to find out which health determinants could be negatively or positively influenced by the development document, what is the nature and significance of these impacts and what knowledge is available for analysing them.

With this check-list we can estimate the possible health impacts of the concept but the check-list itself still does not determine whether HIA is necessary or not. It is usually a matter of opinion about what sources of information are available and applicable for HIA. Most members of the team agree with the criteria on when HIA should be carried out; for example HIA is always carried out in concepts where health is neither mentioned nor evaluated or where a disadvantageous impact on a sensitive population group is expected.

#### Screening questions

Does the concept have an impact on one or more health determinants?

impact scale	impact level
-2	significant negative impact
-1	moderate negative impact
0	no impact
1	moderate positive impact
2	significant positive impact

Social environment	Lifestyle and behaviour	Availability of services	Natural environment
employment	nutrition	education	air
income level	physical activity	health services	noise
social contacts	smoking	social services	housing
family and community cohesion	alcohol	leisure activities	water quality
location characteristics*	sexual behaviour	transportation	climate
demographic changes**	drugs	shopping possibilities	waste
racism	gambling	information technologies	soil
social exclusion	stress	institutions	bad smell
relationship to the location, other perspectives of the location	leisure activities	energy	epidemiological risks
civic approach***	accident rate		introducing chemicals into the environment
risk perception			work environment

crime rate			landscape changes
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(4) Other determinants added to the source

\* housing, culture, safety, crime rate, attractiveness of the location

\*\* labour force demand, age structure changes, migration

\*\*\* possibilities of participating in society governance, including decision-making processes of authorities, willingness to vote in elections

Does the concept deal with health?	yes	no
Are health impacts included in the concept and have they been sufficiently assessed?	yes	no
Will any impact of the concept be irreversible?	yes	no
Will any sensitive population group be influenced by the concept?	yes	no
Who will be disadvantaged by the concept?	specify	
What will be the geographical scope and population size impact of the concept?	specify	
Is there a conflict or disagreement on the concept? If so, will HIA solve this problem?	yes	no
Are there enough time, money and experts to undertake HIA?	yes	no
Can the concept proposal be changed if necessary?	yes	no
Will the concept proposal have an impact on Health 2020 / regional health policies?	yes	no
Will the development document have an impact on other concepts?	yes	no
Does the concept contain required measures to minimise health risks?	yes	no

The author must undergo screening in cooperation with a public health protection authority.

**The outputs of the screening should be as follows:**

a) determinants influenced by the development document assessed according to the above matrix,

Determinant group	determinants	impact level	note
<b>overall determinant group assessment</b>			

Example: Raw materials policy concept

Determinant group	determinants	impact level	note
<b>Natural environment</b>	air	-1	Dustiness
	noise	-2	Stationary and line noise sources, blasts
	housing	0	In an area without buildings
	water quality	-2	Influence on groundwater, mainly in uranium mining
	climate	-1	Influence of deforestation on the local climate
	waste	-1	Waste production in mining
	soil	-2	Soil mining
	bad smell	0	No impact
	epidemiological risks	0	No impact
	introducing chemicals into the environment	-2	In chemical uranium mining
	work environment	-2	Ionizing radiation, noise, dustiness, vibrations
	landscape changes	-1	Before landscape re-cultivation, changes of the land relief
* Overall	negative impact of the concept on environmental determinants		



<b>Determinant group</b>	<b>determinants</b>	<b>impact level</b>	<b>note</b>
assessment			

\* The overall assessment is not just based on adding the figures in the impact level column; it is an overall assessment of the given group of determinants, i.e. if an impact is significantly negative (even if it is only one impact), the overall assessment is negative.

- b) summary related to the questions,
- c) decision on whether to carry out HIA or not.

In practice, there are many concept proposals that affect health but with only a very limited impact on the environment and therefore strategic environmental assessment (SEA) is not required for these concepts. Therefore please note that if we want to identify and assess health impacts, we cannot only rely on including health assessment in the EIA/SEA process, where a public health protection authority decides whether to carry out HIA. So, screening must be carried out in all concept proposals.

At the same time, it should be emphasized that in some concepts, HIA is automatically included in SEA. In these cases rapid assessment can be employed to identify those determinants that should be followed more closely.

### **3.2 Building an HIA team**

If it is decided that HIA is needed, someone must be authorized to do so. As HIA often requires knowledge of different sectors, more members of the team are usually employed.

- a person dealing with the subject of the concept proposal (transportation, housing, education, industry, waste, etc.)
- a person dealing with public health with a knowledge of the determinants of health (a representative of RPHA, National Institute of Public Health, health institute, etc.)
- representative of local communities (regional representative, NGO, etc.)

In practice, the team should be made up of at least the HIA author, an expert on protection and support of public health and the concept author.

The team informs the managing group of the concept proposal, which is entitled to influence the assessment sources and is responsible for them at the same time, and also approves the final recommendations. This guarantees that the HIA recommendations become part of the concept.

It is also beneficial to cooperate with the author of the environmental assessment.

### **3.3 How to carry out scoping**

The purpose of this stage is to determine the scope and method of HIA, to set up the tasks and a timeline. It involves determining the possible impacts in terms of their geographical distribution and development in time, identifying the influenced population and its groups, the main targets and aims of the assessment, influenced public interests, available methods and financial means.

The outputs of scoping should be:

- choosing the HIA method,
- determining the geographical scope of the concept proposal impacts,
- identifying the groups and determining the size of the population influenced by the concept,
- setting up a timeline for undertaking HIA.

### Determining the scope and HIA method

<b>Desk based HIA</b>	<b>Rapid HIA</b>	<b>Comprehensive HIA</b>
Can last a few hours or a day and is only carried out by a limited number of persons who use existing knowledge and evidence to assess the concept.	Can last days or weeks and there is usually a small managing group. It often includes meetings with the parties involved. It usually involves a brief assessment of health impacts, creating a list of sources containing evidence, gathering information on impacts and gaining insights and knowledge from the local parties involved.	It is more in-depth and can last months. It tends to be intense and costly and requires extensive research and gathering primary data. There are many people involved.
It provides a general overview of possible health impacts	It provides a detailed overview of possible health impacts	It provides a complete assessment of possible health impacts

Often an HIA method between Rapid HIA and Comprehensive HIA is chosen due to the nature of the concept or because of time pressure or limited human, organisational and financial resources. This method is referred to as Intermediate HIA. (5, 6)

The output of the above methods should be a decision as to which method should be chosen, who it should be carried out by and in what time frame.

<b>Method</b>	<b>Note</b>	<b>Responsibility</b>	<b>Deadline</b>

<b>Influenced population group</b>	<b>Yes/No/Specify</b>
Whole population	
Children and youth (if applicable, specify the individual age groups)	
Adults	
Seniors	
Pregnant women	
Chronically ill	
Handicapped persons (including allergic persons)	
Persons abusing substances (alcohol, drugs)	
Unemployed	
Minorities.....specify	
Single parent raising a child	
Parent on parental leave	
Low income persons	
Homeless	
Other groups.....specify	

(7) source amended

### Identification of population included or excluded in terms of health inequality

Which population group is excluded?	Reason for exclusion?
Which population groups are included in the concept/policy?	Reason for inclusion?

The aim of the above tables is to gain an overview of population groups affected by the concept.

### Geographical scope of concept impacts

<b>Geographical scope of concept impacts</b>

An example could be a socially weak area or an area with exceeded limits affected by the concept.

## 3.4 Identification of impacts

It is important to gather information on the affected population, its health condition, socio-economic situation and sensitive and disadvantaged groups. This information cannot only be gained from general statistics. Additional local sources such as public health protection authorities, local administration, institutions providing health and social services must be employed or targeted surveys and workshops with local authorities and citizens involved organized.

Possible ways of gathering information are given below.

### 3.4.1 Identifying and setting up the concept's targets that have health impacts

The output is the identification and summary of targets with health impacts within the concept, and identifying the determinants and influenced population groups.

Target of the concept	Determinants influenced	Population group influenced	Note

#### Example:

Target of the concept	Determinants influenced	Population group influenced	Note
Reducing flying dust in the air	air	mainly small children, asthmatics, chronically ill	

It must be noted that different population groups can be exposed in different ways depending on their lifestyle, health condition and diseases. Therefore, different impacts can be expected for different groups.

### 3.4.2 Analysis of existing health policies

#### 3.4.2.1 Comparison of the concept proposal with Health 2020, regional health policies

Impact scale	Impact level
1	concept meets Health 2020 / regional health policy
2	supports Health 2020 / regional health policy
3	no impact
4	does not support Health 2020 / regional health policy
5	not in accordance with Health 2020/regional policy

#### Assessment of the impacts of the concept on Health 2020 (8)

Health 2020	Impact level	Note
Lifelong investment in health, strengthening the role of citizens and creating the conditions for enhancing their personal responsibility for health		
To face the greatest health issues of Europe - non-contagious and contagious diseases		
To strengthen human medical systems, develop public health care capacities, ensure crisis readiness, monitor the health situation and ensure an appropriate reaction in exceptional situations		
To participate in creating motivated and resistant social groups living in an environment that is beneficial to their health		

Accordingly, this evaluation can be carried out for a regional health policy, if applicable.

#### 3.4.2.2 Analysis of other health policies

The purpose is to identify targets and activities corresponding to the concept proposal. The impact can also be caused indirectly, which is the reason for an extensive analysis of different phases.

The output of comparing the concept with reference documents (Health 2020 or another concept involving health protection targets) can be information that should be included in the concept that is being created.

Health 2020 or other policies involving health protection targets	Health protection target	Measures adapting the concept	Note

#### 3.4.3 Evaluating sources for impact identification

The aim is to evaluate the sources and determine possible health impacts that will also serve as evidence for formulating a new target or measure for reducing the impact.

## **Analysis of the health condition of the influenced population**

A brief analysis of the current health condition of the population should be included in the identification of impacts. The aim is to gather information on sensitive population groups, establish the "initial health condition" of the population for monitoring and identify potential issues. For example the Health Report or reports from the NIPH System of monitoring the environmental impact on the population's health, RPHA or the Institute of Health Information and Statistics of the Czech Republic (hereinafter "IHIS") and the Czech Statistical Office (hereinafter "CSO") can be used as the material.

## **Health risk assessment**

Another part of identifying impacts can be a qualitative or quantitative assessment of the health risks. The aim is to determine the hazardousness of a factor/chemical, evaluate the relationship between the dose of a factor/chemical and the body response, evaluate the exposure (clarifying the ways of exposure) and characterise the risk - i.e. the probability of damage. A quantitative assessment can be carried out if there is data available on health determinants and sufficient knowledge on the relationship between the dose and response is available.

In the Czech Republic, a health risk assessment is guided by the authorization guidelines published by the National Institute of Public Health in Prague (hereinafter "NIPH"). It should be noted that compared to health risk assessment, HIA is much more extensive and complex. A whole range of possible determinants have to be taken into account including their possible, more or less mediated, changes caused by planned activities. HIA uses estimations of the probable development of different determinants and their changes and mutual relations. It uses more general than particular information and, most importantly, it assesses not only risks, but also potential impacts on health. (1)

### **3.4.3.3 Discussion (Brainstorming)**

The HIA team and potentially other specialists should assess and establish possible health impacts based on their experience and knowledge.

### **3.4.3.4 Extrapolation**

Another option is to use information and conclusions from other documents available, even though they seemingly do not have any relation to the subject of the concept proposal.

### **3.4.3.5 Sociological survey, opinion poll**

This can be carried out in different ways. The respondents can be addressed through the concept author's website, during public discussion or directly by addressing interest groups. The insights of citizens or groups in the region are advantageous.

### **3.4.3.6 Public discussion (Workshop)**

A public discussion has to be properly organised; its outputs should be a list of possible impacts. Also an evaluation of the impact priorities from the perspective of the participants is of benefit.

### 3.5 How to carry out an impact assessment

This is a key stage of HIA that includes gathering and evaluating information on the nature, probability and scope of the possible health impacts of a concept. It also provides material for identifying any ways of minimising negative and enhancing positive impacts, mainly in the most sensitive and disadvantaged population groups. It uses both quantitative and qualitative impact assessment methods combined according to the particular situation. In justified cases, using the precautionary principle in assessment should be taken into account, i.e. to rationally protect from a probable dangerous impact that has not necessarily been satisfactorily proven yet and has not been covered in the current limits and health protection guidelines.

The aim of an assessment is to evaluate impacts and set up measures to improve the health impacts in a concept. During the assessment, priority impacts that are not in accordance with each other or with other factors must be determined and evaluated.

Target of the concept	Impact on determinants	Positive health impact		Negative health impact	
		impact	possible measures	impact	possible measures

One of the ways of influencing health impacts through the concept is to establish conditions for selecting projects that will be implemented based on the concept within a grant procedure.

For example:

Noise:

- will the project help to reduce noise pollution in the area?
- will the project help to reduce the number of citizens affected by exceeded noise limits?

### 3.6 How to formulate recommendations

The report presenting the gathered and assessed information and explaining the recommendations can have different forms depending on the type of the concept and the purpose of HIA. It can be a simple table and a standardized check-list or a complex report as a part of SEA. All those involved in the assessment procedure should be consulted on its draft and approve it, including the concept's author. The recommendation for the concept enhancing the health benefits and minimising the potential negative impacts should be brief, clear and to the point, realistic, doable, feasible in terms of scope, impartial and reflect the evidence and opinions of all HIA team members. (5) Where a possible health inequality is identified, the recommendation should include a suggestion to deal with this in greater detail.

#### Example of a recommendation formulation

Amendment recommendation	Indicator	Justification

### 3.7 How to monitor impacts

Most HIAs recommend monitoring the health impacts of the concept. The reason for this is that activities following the concept can have unpredictable health impacts and further monitoring can help to build up evidence for future HIAs.

The monitoring should be reasonable, i.e. it should be targeted at the population covered by the strategic document and an indicator should be identified. The aim of the monitoring is to answer questions such as the following: Have citizens benefited from the concept being implemented as expected? Has the population suffered greater damage than expected or accepted? Could health develop positively? To what extent? Were HIA recommendations taken into account when implementing the concept? What issues were encountered when carrying out the HIA recommendations when implementing the concept?

#### Example of an indicator formulation

indicator	source	level (region, county, municipality)	measurement frequency

If there is no statistical data or indicators, the assessment can be carried out through an assessment table.

An overview of the basic indicators is given in the appendix to this guide. It illustrates the sources and indicators followed.

### 3.8 Brief summary of HIA

The HIA conclusion should include an assessment summary and recommendations for amending the concept.

## Conclusion

The HIA method and the assessment of the relation of the concept to the Health 2020 policy or to regional health policies are very efficient criteria for evaluating the implementation of health in a concept. The HIA method ensures that protection and support of health will be of importance in the future development. Therefore its implementation in concepts should be enforced and this guide has also been created for this purpose.

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## Appendix 2 Indicators

Indicator	Data provided by	Monitoring level	Frequency
<b>Health condition of the population - general part</b>			
Number of citizens in selected age groups	IHIS data, source CSO	up to municipality with extended competence level	annually
		up to municipality level	once in 10 years, irregularly in the meantime
Life expectancy at birth	IHIS data, source CSO	regional level	annually
		county level, municipality with extended competence level	once in 5 years
Standardized mortality rate	IHIS data, source CSO	up to municipality with extended competence level	annually
Number of people admitted to hospital according to the reasons for admission	National Registry of Inpatients, IHIS	county level	annually
Incidence of neoplasms in total (without dg C44)	National Cancer Registry	up to municipality with extended competence level	annually
Incidence of selected contagious diseases	EPIDAT, Registry of Venereal Diseases, Tuberculosis Registry	county level	annually
<b>Indicators of selected concept targets - selected, example</b>			
Allergy and asthma morbidity	<u>IHIS</u>  NIPH monitoring centre	<u>county level</u>  16 selected cities of the CR	<u>Annually</u>  once in 5 years
Drinking water quality (% of unsatisfactory samples)	RPHA - PiVo Information System	municipality level	annually

<b>Indicator</b>	<b>Data provided by</b>	<b>Monitoring level</b>	<b>Frequency</b>
Drinking water quality exceptions - number of citizens water is supplied to	RPHA	municipality level	annually
Quality of water bodies for swimming	RPHA - PiVo Information System	municipality level	annually
Air pollution (exposure of citizens PM <sub>10</sub> )	CHMI immission maps (5-year-average concentrations) and CSO	municipality level (scale 1x1km)	annually
Exposure of citizens to road traffic noise	Noise maps of cities, materials related to road operators' applications for exception from keeping the noise limits, etc.	municipality level	irregularly
Average gross earnings per employee	CSO	CR/region	quarterly/annually
Net earnings per capita	CSO	region	annually
Unemployment	CSO	CR/region	quarterly, estimation monthly/annually