Enabling the implementation of health impact assessment in Portugal
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Abstract
Health impact assessment (HIA) is a means of assessing the health impacts of policies, plans and projects in diverse economic, social and environmental sectors using quantitative, qualitative and participatory techniques. The recent Portuguese strategy for protecting and promoting public health provides an important legal and policy entry point for the strategic goal of health in all policies, and for the more operational objective of facilitating HIA implementation at the national and local levels. This could be achieved by enabling the health sector to take leadership for HIA in Portugal. This report is a summary of a two-year capacity-building project supported by the WHO Regional Office for Europe, represented by the WHO European Centre for Environment and Health, and the Portuguese Ministry of Health, represented by the National Institute of Health Dr Ricardo Jorge. The process included three capacity-building workshops and supervision of three HIA case studies in Portugal.

Keywords
HEALTH IMPACT ASSESSMENT
HEALTH POLICY
POLICY MAKING
PORTUGAL

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Foreword

Revitalizing efforts to protect and promote public health is a major focus in Portugal, as in other countries in the WHO European Region. Portugal’s public health strategy includes efforts to strengthen policy governance in the health and other sectors, facilitating a whole-of-government approach to ensure population health. Improving public health, including addressing health inequity, is a policy priority. Poor health outcomes unfortunately often fall disproportionately on people who are less socially advantaged, so Portugal’s public health strategy also focuses on improving outcomes and opportunities for all.

Health impact assessment (HIA) is a structured process to strengthen consideration of health in a proposed policy, programme, project or plan in any sector. It brings together quantitative and qualitative methods. HIA is an important methodological approach that brings to life the whole-of-government approach and the concept of health in all policies. The European Directive on Environmental Impact Assessment (2014/52/EU) – which included assessment of the impacts of projects on population health on top of mandatory assessment elements within environmental impact assessment and strategic environmental assessment – gave new impetus to development and implementation of HIA.

This report synthesizes existing knowledge on internationally recognized HIA methods and approaches, examining HIA in other European countries, along with practical advice on how HIA can be implemented using the existing expertise and institutional arrangements in Portugal. The report is the output of a two-year collaboration between the Portuguese Ministry of Health, represented by National Institute of Health Dr Ricardo Jorge, and the WHO Regional Office for Europe, represented by the WHO European Centre for Environment and Health. It complements a growing base of literature on how HIA can be implemented, and should be read in conjunction with this. The report is part of an ongoing process: comments and contributions are welcome.

Fernando de Almeida
President, Executive Board of the National Institute of Health Dr Ricardo Jorge
Foreword 2

It has long been recognized that the health sector cannot tackle the complex, far-reaching health determinants of modern societies alone. Health systems play a key role in determining public health in Europe, but the active involvement of other sectors and civil society is essential if the health of all European citizens – including the most vulnerable groups – is to be protected and improved. Policies in sectors such as environment, industry, agriculture, economy and so forth can and do influence a variety of powerful health determinants.

Intersectoral work is difficult: it gives rise to conceptual and practical challenges. The scientific bases, use of sound evidence, consideration of equity issues, methodology for assessing the health implications of policies in different sectors, mixing of quantitative and qualitative data, involvement of relevant stakeholders and management of multidisciplinary work: all these issues, and many more, have been addressed over the years, and invaluable experience has been gained in many settings internationally. Significant progress has been made in understanding how the health sector can initiate, promote and engage in intersectoral action over the last three decades.

Recently, governance models where health is an integral part of policy in all sectors have gained prominence. The years fighting the COVID-19 pandemic have further highlighted the importance of intersectoral collaboration. Intersectoral work is approached in many ways, and such a wealth of views and experiences is invaluable to sustain these efforts. Among such approaches, health impact assessment (HIA) has established itself as one of the main means to achieve intersectoral action and consideration of health in all policies. HIA now has a strong tradition, as it has been adopted and applied in many countries, at various levels. It has proved an effective approach to understanding and dealing with the health implications of policy choices in all sectors. Unsurprisingly, therefore, more and more countries and health authorities have invested in capacities for HIA, including human, intellectual and financial resources. Alongside expertise, adequate institutional arrangements are essential to initiate and use HIA in a sustainable way, and to promote the underlying intersectoral “culture”. Concrete implementation of HIA and intersectoral work are therefore key components of the process. Careful consideration of opportunities and constraints for implementation is at least as important as ensuring the necessary technical capacity.

Furthermore, legal obligations exist to assess impacts on population and human health within environmental assessments through the European Union directives on environmental impact assessment (Directive 2014/52/EU) and on strategic environmental assessment (Directive 2001/42/EC), and through the Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context of the United Nations Economic Commission for Europe. Public health authorities need to be prepared not only to assess the impacts of policies, plans, programmes and projects of the health sector but also to engage in environmental assessments.

WHO is very happy to have supported Portugal in developing joint HIA case studies based on capacity-building activities and policy dialogues, and in publishing this report.

Francesca Racioppi
WHO European Centre for Environment and Health
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1Order No. 11232/2016 (Government of Portugal, 2016)
### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>BCA</td>
<td>Biennial Collaborative Agreement</td>
</tr>
<tr>
<td>FOP-NL</td>
<td>front-of-pack nutrition labelling</td>
</tr>
<tr>
<td>DGS</td>
<td>Directorate-General of Health</td>
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<tr>
<td>EIA</td>
<td>environmental impact assessment</td>
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<td>EU</td>
<td>European Union</td>
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<td>EUPHA</td>
<td>European Public Health Association</td>
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<tr>
<td>HIA</td>
<td>health impact assessment</td>
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<tr>
<td>HiAP</td>
<td>health in all policies [approach]</td>
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<tr>
<td>IAIA</td>
<td>International Association for Impact Assessment</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>INSA</td>
<td>National Institute of Health Dr Ricardo Jorge</td>
</tr>
<tr>
<td>NCCEH</td>
<td>National Collaborating Centre for Environment and Health</td>
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<td>NCCHPP</td>
<td>National Collaborating Centre for Healthy Public Policy</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>PSPPP</td>
<td>policy, strategy, plan, programme or project</td>
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<tr>
<td>SDG</td>
<td>Sustainable Development Goal</td>
</tr>
<tr>
<td>SEA</td>
<td>strategic environmental assessment</td>
</tr>
<tr>
<td>SOPHIA</td>
<td>Society of Health Impact Assessment Practitioners</td>
</tr>
<tr>
<td>UNECE</td>
<td>United Nations Economic Commission for Europe</td>
</tr>
<tr>
<td>WHIASU</td>
<td>Wales Health Impact Assessment Support Unit</td>
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Executive summary

During the last decade, interest in, commitment to and action on tackling the social determinants of health and equity have increased in Portugal, leading to investigations into how intersectoral action and a health in all policies approach can play a decisive role in achievement of this goal. Important examples include the international external evaluation of the Portuguese National Health Plan 2004–2010 and the health systems performance assessment as part of the ongoing collaboration between the WHO Regional Office for Europe and the Portuguese Ministry of Health through the Biennial Collaborative Agreement (BCA).

Within this context, the BCA for 2012–2013 included a commitment from WHO to provide technical assistance and build capacity to undertake equity-focused health impact assessment (HIA) and develop related policy assessment approaches. The aim was to support a multidisciplinary multisectoral approach and to strengthen the development of healthy public policy, including building competences for assessing and supporting public health and wider public policy action on the social determinants of health and equity.

An HIA training programme was launched by the National Institute of Health Dr Ricardo Jorge in 2017 to support implementation of HIA in Portugal. Three national workshops were conducted to train experts from various fields in developing HIA. Case study working groups were set up at the first workshop in November 2017, supervised by WHO staff and an external consultant. In January 2019, a second workshop was organized to support further development of the case studies and to discuss and outline guidance on implementation of HIA. Following completion and presentation of the case studies, a final workshop was organized as a policy dialogue meeting, with the participation of the case study leaders and a number of government representatives.

Based on discussions during the workshops and the development of the case studies, a roadmap for implementation of HIA in Portugal was created, in consultation with relevant stakeholders involved in the process. To achieve full and systematic implementation of HIA, the roadmap proposes:

- establishment of an intragovernmental committee;
- creation by the Ministry of Health of an ordinance on HIA;
- creation of a national HIA support unit;
- development of screening and scoping tools adapted to the national context; and
- creation of a professional recognition system and associated training.
1. Introduction

Prior to the 1970s, health system resources in many countries primarily prioritized actions within the health system itself to protect and promote public health. Since 1974, however, a suite of scientific research and statements of political commitment have presented increasing evidence for the allocation of health system resources to broader factors that determine people’s health – namely, economic, environmental, social and cultural factors (Lalonde, 1974; WHO Regional Office for Europe, 1978; 1986; 2010a; WHO & Government of South Australia, 2010).

The health in all policies (HiAP) approach articulated in Portugal’s public health strategy builds on this, recognizing that public health is the responsibility of not only the health sector but also many other economic, environmental, social and cultural sectors and institutions (Abrantes & Simoes, 2018). Health impact assessment (HIA), a tool that aids decision-making, is one way through which the HiAP approach can be put into action. HIA has been accepted in many countries over the last 20 years as an effective and evidence-based decision-making tool to ensure that health and the determinants of health are considered in the policies of all sectors (Kemm, 2012; O’Mullane, 2013; Ross, Orenstein & Botchwey, 2014).

1.1 Determinants of health

One way to think about economic, environmental, social and cultural determinants of health is to conceptualize them as layers of causation. The model created by Dahlgren and Whitehead (1991) and developed by Barton and Grant (2006) is commonly used to provide a representation of these layers (Fig. 1).

Fig. 1. A layered model of the socioeconomic determinants of health

![Diagram of socioeconomic determinants of health](source: Nowacki (2018), adapted from Barton & Grant (2006), based on Dahlgren & Whitehead (1991a,b). Reproduced with permission from the Institute for Futures Studies.)

Fig. 1 shows that while factors such as age, sex and genetics are important in determining health, several other factors also have an impact. Individual lifestyle choices – including physical activity,
nutrition and tobacco use – are also significant, but social and community influences, living and working conditions, and general environmental, economic, social and cultural factors shape these. An HiAP approach attempts to address this layered set of causal factors on health. HIA bolsters decision-making in health and other sectors to consider both these determinants of health and the distribution of health outcomes within and between population groups.

1.2 Distribution of health outcomes

Portugal’s public health strategy identifies sociodemographic differences – such as those between urban and rural populations – in several health outcomes (Abrantes & Simoes, 2018). Poor health outcomes unfortunately often fall disproportionately on people who are less socially advantaged: poorly educated people die at a higher rate than highly educated people; people from lower social strata die at a higher rate than those from higher social strata; and people on low incomes die at a higher rate than those on higher incomes (Blakely et al., 2002). Life expectancy is commonly used to monitor population health, including describing and monitoring population health by sociodemographic group (Carter, Blakely & Soeberg, 2010).

Fig. 2 illustrates differences in life expectancy by education level in selected Organisation for Economic Co-operation and Development (OECD) countries in 2010-2019. Portugal belongs to a group of countries with relatively small differences in life expectancy between population groups with the highest and lowest levels of education.

**Fig. 2. Gap in life expectancy at age 30 between people with the highest and lowest education levels, 2019 (or nearest year) in selected countries**

Note: The figures show the gap in the expected years of life remaining at age 30 between adults with the highest level (tertiary education) and the lowest level (below upper secondary education) of education.


While socioeconomic inequalities in health by education, among others, have been reported in many countries, they are not unchangeable (Shkolnikov et al., 2006). HIA is a tool that helps
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decision-makers to identify populations more likely to be adversely affected by proposed policies, programmes and projects, and to develop recommendations to mitigate the negative health impacts on these sociodemographic groups.

2. HIA

HIA is a method to assess future impacts of a policy, strategy, plan, programme or project (PSPPP). It differs from evaluation as it is usually performed prospectively before the PSPPP is put into practice or concurrently with the PSPPP preparation process. It differs from needs assessment and mapping because it addresses a concrete document. It differs from health risk analysis because it not only analyses the health risks linked to a concrete PSPPP but also aims to calculate or describe in depth the potential impacts of those risks on health of the target population. Finally, it differs from risk assessment as it takes into account not only the scientific evidence of risk but also the perceptions of stakeholders and the target population.

2.1 Defining HIA

A commonly accepted definition for HIA is:

a combination of procedures, methods and tools by which a policy, program or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population.

This is articulated in the Gothenburg Consensus Paper (European Centre for Health Policy, 1999), which also describes the values of HIA as:

- **democracy**, emphasizing the right of people to participate in a transparent process for the formulation, implementation and evaluation of policies that affect their life, both directly and through the elected political decision-makers;
• **equity**, emphasizing that HIA is not only interested in the aggregate impact of the assessed policy on the health of a population but also on the distribution of the impact within the population, in terms of gender, age, ethnic background and socioeconomic status;

• **sustainable development**, emphasizing that short-term, long-term and more and less direct impacts are taken into consideration; and

• **ethical use of evidence**, emphasizing that the use of quantitative and qualitative evidence has to be rigorous, and based on different scientific disciplines and methodologies to get as comprehensive assessment as possible of the expected impacts.

Dialogue on the role of HIA has revolved around a desire to build “healthy public policy” – a term formalized by WHO in the 1980s, particularly through its articulation in the Ottawa Charter for Health Promotion (WHO Regional Office for Europe, 1986). As a starting-point for discussion, the following definition of healthy public policy was proposed (Milio, 2001):

Healthy public policies improve the conditions under which people live: secure, safe, adequate, and sustainable livelihoods, lifestyles, and environments, including housing, education, nutrition, information exchange, child care, transportation, and necessary community, and personal social and health services. Policy adequacy may be measured by its impact on population health.

HIA is an approach that supports two generally agreed conditions for healthy public policy:

• the health consequences of different policy options have to be correctly predicted; and

• the policy process has to be influenced so that health consequences are considered (Kemm, 2001).

The ideas underlying HIA are not new. As Kemm (2001) continues: “policy-makers have always intended outcomes for their policies and frequently those outcomes embraced improvement in the health and well-being of populations”.

The HIA process needs to be integrated within policy-making processes. If policies and legislation are to contribute to a high level of health protection, the main objective is to put health considerations high on the agenda of policy-makers (Hübel & Hedin, 2003). HIA has emerged to support intersectoral decision-making for healthy public policies (Bekker, Putters & van der Grinten). It offers a practical way to increase the level of cooperation between the health and other sectors to improve population health (Cole et al., 2005). Within the European Union (EU), one of the initial advantages of using HIA appears to be strengthened understanding among policy-makers of the interactions between health and other policy areas (Lock & McKee, 2005). More broadly, it is noted (Elliot & Francis, 2005) that:

awareness raising amongst decision-makers and establishing dialogues between stakeholders are also positive outcomes of the health impact assessment process, which indirectly feed into decision-making. It is paramount that these wider benefits and indirect links to decision-making continue to accrue and are recognized in the health impact assessment literature.

HIA aims to influence the decision-making process in an open and structured way (Lock, 2000). Much remains to be done before evidence-based policy-making can become a reality, however (Scott-Samuel, 1996). This includes gathering evidence on whether HIA is an effective tool for
policy-makers, and balancing quantitative and qualitative evidence against the experience of policy-makers and stakeholders.

In this context, Harris-Roxas & Harris (2011) defined four major types of initiation of HIA:

- **mandated HIA**, which mainly occurs in the context of an environmental impact assessment (EIA), integrated impact assessment or environmental, social and health impact assessment, and is only mandatory in a limited number of countries or regions (WHO Regional Office for Europe, 2023);
- **decision support HIA**, which is conducted voluntarily by, or with the agreement of, organizations responsible for a proposal;
- **community-led HIA**, which is conducted by organizations or groups who are neither proponents nor decision-makers, but have an interest in the health impacts of a specific PSPPP; and
- **advocacy HIA**, which is conducted by potentially affected communities on issues or proposals that are of concern and to advocate for a certain option or outcome.

Furthermore, after implementation of Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment (the EIA Directive) – the amended version of Directive 2011/92/EU (European Parliament & Council of the European Union 2014; 2011) – in EU Member States, the assessment of impacts of certain plans, programmes and/or projects on health is at some extent mandated in every EU country (see section 2.2).

### 2.2 HIA in the EU

It is commonly agreed by researchers and decision-makers that many factors determine the health of individuals and communities. Some of these factors are the responsibility of the health sector – such as provision of health care services. However, many of the factors that protect and promote the health of populations are strongly influenced by policies and actions of sectors outside the health sector. For example, there is a strong relationship between the physical environment (such as air and water quality) and health outcomes; these issues are often managed by environmental agencies.

There is also evidence to support causal links between socioeconomic conditions and health outcomes. Income and education levels, as well as occupational class and employment status, are used as indicators to showcase the relationship between health and socioeconomic position. This further emphasizes the need for the health sector to work with other agencies to protect and promote health. The substantial variations in economic and social development between EU countries have also led to significant public health issues such as differences in life expectancy.

In this context, the HiAP approach was prioritized during the Finnish Presidency of the EU in 2006 and the Polish Presidency of the EU in 2011. The Finnish Presidency recognized that many sectors need to be involved in policy development and implementation processes in order to protect and promote health. This intersectoral approach mirrors one of the underlying principles of HIA. It also reflects the commitment in EU treaties of a high level of health protection across all community policies. It is anticipated that the HiAP approach will contribute to the building of healthy public policy across the EU. Further discussion of the state of HiAP in Europe is set out by Koivusalo (2010).
As Lock and McKee (2005) point out:

Impact assessment methodologies are applied at the level of the EU and individual member states. The first European directive on environmental impact assessment (EIA) was adopted in 1985. There is also experience with social impact assessment, sustainability assessment, and integrated impact assessment. The last of these has been developed in the context of the complex challenge of identifying the implications of long range trans-border pollution and entails the integration of many diverse sources of data. A legal basis for assessing policy health impacts emerged in article 129 of the Maastrict Treaty (1993) and remained in article 152 of the Amsterdam Treaty (1997). Article 129 on public health stated that “health protection shall form a constituent part of the Community’s other policies”. However, as article 129 precluded harmonising legislation it had little influence on policy within member states. It also did little to foster an intersectoral approach to policy at a European level as despite the intentions of article 129 the means to carry it out are lacking. Article 152 of the Amsterdam Treaty (ratified in 1999), stated that “a high level of human health protection shall be ensured in the definition and implementation of all community policies and activities”. This strengthened the case for EU action, creating an opportunity to develop HIA as a means to achieve assessment of policy health impacts.

Assessing the health impacts of policies, plans, programmes and projects is also supported within the EU context through the EIA Directive. The amended Directive of 2014 specifically mentions “population and human health” as a category for assessment, whereas the earlier version only mentioned “human beings”. In addition, the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention) of 1991 and the Protocol on Strategic Environmental Assessment to the Espoo Convention (SEA Protocol) of 2003 of the United Nations Economic Commission for Europe (UNECE) promote a broader view (UNECE, 1991; 2017). These reference both the environment and human health, and request the involvement of health experts in the strategic environmental assessment (SEA) process. Both the Espoo Convention and the SEA Protocol provide valuable opportunities to protect and promote health across sector-wide policies. WHO is making efforts to increase knowledge and capacity in this area, by providing diverse training opportunities on HIA and health assessment in environmental assessments for Member States, and by promoting enhanced implementation of HIA in multiple publications.


2.3 The HIA experience in other countries

Despite the need to develop HIA within the political, legal and policy contexts of each individual country (Banken, 2003), developments in both EU and non-EU countries may be useful to guide HIA implementation in Portugal. A complete analysis and critique of the HIA experience across the Region is outside the scope of this report, but a useful starting-point is a description of key HIA developments in EU and non-EU countries to understand the factors that may contribute to greater institutionalization of HIA (WHO Regional Office for Europe, forthcoming). In general, international experience shows that successful HIA implementation is associated with:
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- having a national HIA framework – either a policy document or a legal framework;
- establishing an HIA support unit; and
- identifying and building on existing EIA and HIA capacity and capability.

The following sections provide examples for all three elements.

2.3.1 A national HIA framework

Lithuania’s Law on Public Health Care of 16 May 2002 makes specific a requirement to undertake HIA with a focus on economic activity. The Law states that HIA should be carried out using the same procedure as EIA, and notes that a methodology would be drafted by the Ministry of Health. Further, it includes a requirement to ensure public health safety when carrying out spatial planning activities, as well as when initiating or expanding economic activities (Vohra, Nowacki & Martuzzi, 2016).

Several key steps have helped to institutionalize HIA in Ireland, including the development of a national environmental health action plan in 1999 and a national health strategy in 2001 (Kearns & Pursell, 2011). In addition, the Institute of Public Health was established with a focus on HIA training, resources, guidance and reviews of HIA practice, such as a set of guidance documents published in 2021 (Pyper et al., 2021). Another factor that helped to strengthen HIA implementation in Ireland was active membership of the WHO Healthy Cities movement (WHO Regional Office for Europe, 2022a).

Slovakia is another EU country where HIA is established by law: the Protection, Support and Development of Public Health Act of 2007 includes a requirement for HIA to be conducted from January 2011 (O’Mullane, 2014).

2.3.2 An HIA support unit

The United Kingdom of Great Britain and Northern Ireland consists of England, Northern Ireland, Scotland and Wales. The development of HIA across the United Kingdom is described elsewhere (Taylor & Blair-Stevens, 2002), but the importance of government support is shown in an example from Wales (Breeze & Hall, 2022). The change in the Welsh parliamentary system led to publication of a set of government priorities in 1999, including health and well-being as well as sustainable development, equal opportunities and tackling social disadvantage. The Welsh Assembly Government also released a report stating that HIA is an important tool to protect and promote public health, and a Welsh HIA support unit was established (National Assembly for Wales, 1999).

The Netherlands was one of the first European countries to strengthen its HIA frameworks and capacity. This process is described in detail elsewhere (Varela et al., 2001), but in summary, HIA was part of a broader intersectoral policy initiative established in 1986. The Netherlands School of Public Health was set up as the lead HIA agency in 1996.

2.3.3 Building on existing EIA and HIA capacity and capability

Health in environmental assessment has played an important role in the development of HIA in Australia, and to a lesser extent in New Zealand. Addressing broader determinants of health through HIA methods became more of a focus in these countries from the early to mid-2000s. Equity-focused HIA guidelines have been developed in Australia, while New Zealand’s approach has been integration of health equity issues within existing HIA guidelines (Simpson et al., 2005).
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Environmental assessment frameworks have primarily driven the development of HIA in Switzerland and Thailand. More recently, Switzerland has also moved to a cross-sectoral approach to HIA, built on the WHO Healthy Cities movement. In addition, Thailand's HIA model includes a strong public consultation process within HIA, as well as clearly articulated requirements for HIA within national health legislation (Sukkumnoed, 2013).

As in Australia and New Zealand, the development of HIA in the United States draws on both health within environmental assessment and more recently health impacts from the broader determinants of health (Gottlieb et al., 2012; Haigh et al., 2013).

A review of HIA in Canada (British Columbia), the Netherlands, New Zealand and the United Kingdom (Wernham, 2011) found several common experiences when institutionalizing HIA, including the following.

- National legal frameworks are likely to be important tools for institutionalizing HIA.
- A knowledge-transfer model between the health and non-health sectors should be adopted for effective HIA practice; this would ensure that non-health sectors have increased capacity and capability to improve the health of the population via assessment of health impacts.
- Public health agencies should provide ongoing scientific and technical support to non-health sector agencies to ensure that the public health knowledge they produce has scientific and technical validity.
- The values of the HIA process should be integrated into existing decision-making processes and frameworks.

### 2.4 HIA working group to support implementation

When a country is considering action to enable HIA implementation, one way to ensure greater success is to establish an HIA working group. The focus of this group is to develop an implementation plan to identify and support stakeholder engagement and the overall HIA process, as well as maintaining timelines for producing, consulting and delivering the HIA in line with the decision-making process. Its core role is to agree on who should have responsibility for long-term implementation of HIA, which should include:

- identifying existing individuals and institutions with public health and environmental management backgrounds that may have knowledge and experience of HIA or other forms of impact assessment;
- developing a national policy document to provide a framework for HIA implementation;
- identifying available data sources that can be used in the scoping and appraisal stage of HIA;
- establishing partnerships with other sectors and their institutions; and
- developing budget allocations for the HIA support group, training, tool development and pilot studies.
3. HIA in Portugal

3.1 Development of HIA

In Portugal, HIA and health systems impact assessment started to become a focus of attention and studied by health sector professionals only at the beginning of the 21st century (Heitor & Pereira Miguel, 2009). The High-Level Group on Health Services and Medical Care was set up in 2005 by the European Commission, chaired by Portugal, with the collaboration of the European Observatory on Health Systems and Policies (European Commission, 2005) to create an operational tool to support development of non-health policy assessment. This milestone constitutes one of the main foundations for development of HIA-related initiatives in Portugal: previously, HIA – although integrated into the SEA process by professionals from the environment field (Partidário, 1999) – was not undertaken by the health sector.

During the Portuguese Presidency of the EU in 2007, the National Institute of Health Dr Ricardo Jorge (INSA), in collaboration with the Ministry of Health, Council of the European Commission and the Portuguese Observatory of Health Systems, organized the European Meeting on Health and Health Systems Impact Assessment in Lisbon, Portugal, on 5–6 November 2007. This initiative aimed to strengthen development and implementation of HIA and health systems impact assessment by providing a forum for debate on impact assessments. Participants from various sectors were involved, including EU Member States, WHO, decision-makers, community stakeholders, experts and researchers.

To disseminate HIA methodologies more widely and to discuss experiences of HIA in Portugal, in 2009 INSA organized a national workshop on HIA concepts and practices. Several topics related to

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1 Albuquerque JM, Pereira Miguel J, unpublished workshop presentation “Health systems impact assessment and the High-Level Group on Health Services and Medical Care” delivered at EU Ministerial Conference, Rome, 18 December 2007 on Health in all policies: achievements and challenges.
health determinants, the HiAP approach, health inequalities and healthy public policies – as well as HIA methodologies, tools and limitations – were discussed through examples of good practices. The target group for this initiative included representatives of health and non-health sectors mainly from the regional health authorities, the Directorate-General of Health (DGS), the Office of the High Commissioner for Health, municipalities and universities.

During the first decade, bolstered by these pioneering activities, several HIA-related initiatives and collaborations were performed in various domains – including mental health, urban planning (Partidário & Jesus, 2007; Santana et al., 2009; Santana, Santos & Costa, 2009) and health systems (Heitor & Pereira Miguel, 2009). In particular, the relationship between the health and environment sectors became closer after the publication of Decree-Law No. 232/2007 (Government of Portugal, 2007), which not only identified health authorities as part of the consultation process during environmental assessments but also gave particular attention to health questions in strategic environmental reporting. Major landmarks in this context included the organization in 2008 by the Calouste Gulbenkian Foundation of several conferences on the topic of environment and health, and the creation of the National Action Plan of Environment and Health, coordinated by the Ministry of the Environment, Portuguese Environment Agency (APA) and DGS (Presidency of the Council of Ministers, 2008).

In 2009, the DGS issued specific recommendations to the Departments of Public Health to promote the involvement of the health sector in the EIA, which did not materialize. In 2019, after the inclusion of human health in the EIA legislation in line with the EU Directive 2014, the DGS consulted with the Portuguese Environment Agency, which began to request the participation of the health sector in these studies with the respective pronunciation. These included human resources constraints, different technical language and methodological issues. The Portuguese Association of Impact Evaluation could play an important role in enhancing impact assessments in Portugal, as it can serve as a platform for debate between experts and organizations conducting environmental and health impact assessments. The Association, created in 1995, has been affiliated with the International Association for Impact Assessment (IAIA) since 2003, and has been involved in initiatives to promote dialogue between professionals from various sectors interested in different types of impact assessment.

Following the evaluation of the National Health Plan of Portugal 2004–2010 (WHO Regional Office for Europe, 2010b), WHO recommendations included strengthening interministerial involvement and collaboration, and developing capacities for HIA across government. As part of the ongoing collaboration between the WHO Regional Office for Europe and the Portuguese Ministry of Health, the Biennial Collaborative Agreement (BCA) for 2012–2013 included a commitment for WHO to provide technical assistance and support to build capacity for undertaking equity-focused HIA and related policy assessment approaches in Portugal. An HIA training workshop was conducted in Lisbon at INSA facilities in January 2013, and in December of that year a seminar on

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operationalization of HIA and impact assessment on equity and the political process was held in Sete Rios Primary Care Health Unit in Lisbon.

In parallel, work to establish further use of HIA in Portugal was expanded. One example was the creation of a specific work package on mental health in all policies within the EU Joint Action on Mental Health and Wellbeing, coordinated through 2012–2016 by NOVA Medical School, NOVA University of Lisbon (Joint Action on Mental Health and Well-being, 2022). The aim of this work package, in which nine countries including Portugal were represented, was to evaluate and recommend processes for implementing policies, infrastructure and instruments, as well as HIA, that strengthen the links between mental health and other policy areas such as employment (Heitor & Holte, 2016; Guðmundsdóttir & Heitor, 2016).

The Healthy Employment Project – developed by the Institute of Preventive Medicine and Public Health and the Institute of Environmental Health of the Faculty of Medicine, University of Lisbon, and funded through the European Economic Area Grants/Public Health Initiatives Programme – developed work on mental health and HIA. A well-being impact assessment was conducted, with a focus on healthy employment (Cooke et al., 2016).

Several other HIA-related initiatives were also set up in Portugal, and various professionals from different sectors participated regularly in international HIA conferences (Bacelar-Nicolau, Pereira Miguel & Saporta, 2015; Bacelar-Nicolau et al., 2016) and published materials (Loureiro et al., 2015a; 2015b; Santana, 2015). In addition, academic research was undertaken (Bacelar-Nicolau, 2017; Heitor, 2019), and efforts were made to promote specific training through HIA-dedicated networks.

In 2016 the Ministry of Health recognized the need to strengthen public health in the context of the Portuguese health system. This led to the creation of a Commission for National Public Health Reform (Ministry of Health, 2016). Within the scope of the Commission, a model for implementation of HIA/health impact studies in Portugal was delivered as a population-based health planning tool at national, regional and local levels (Commission for National Public Health Reform, 2017). This model proposed not only compulsory HIA at the national level but also voluntary “experimental” HIA from a whole-of-society perspective (as a first approach) at regional and local levels. A bottom-up/top-down approach was suggested, while a focus on equity was considered a priority. Creation of a national coordinating commission, composed of representatives of the DGS, INSA and regional public health services was recommended, but the model did not receive formal approval and was not implemented.

In 2019 a new Law on Health was approved (Government of Portugal, 2019). This states that “public or private programmes, plans or projects that may affect public health shall be subject to impact assessment” (legal base 37), reinforcing the broad consensus among health authorities about the need to implement studies to assess the impact on health from a whole-of-government perspective, at a national level. A national policy document to provide a framework for sustainable HIA implementation is still lacking, however, preventing its systematic practice in Portugal.

3.2 HIA capacity-building initiative launched in 2017

Despite the earlier initiatives, development of HIA as a beneficial tool to support and enable effective intersectoral collaboration in a consistent way is still lacking in Portugal. In particular, HIA is not sustainably integrated and institutionalized in the public health arena. To minimize this
gap, and following the work developed under the scope of the BCA for 2012–2013, an HIA capacity-building programme with a focus on implementation was included in the BCA for 2014–2015. The aim of the programme was to build knowledge and capacities on HIA through theoretical input and practical work on real-life HIA.

The institutions involved as partners in the project were INSA; the WHO European Centre for Environment and Health, Bonn, Germany; the DGS; and the Regional Health Administration of Lisbon and Tagus Valley. INSA took the lead in this process and created an HIA training programme, which was launched in November 2017 at a two-day workshop at INSA facilities in Lisbon (WHO Regional Office for Europe, 2018a).

At this first workshop three multidisciplinary HIA teams were established, comprising members from several institutions in three sectors (health, environment and education), supported by the National Institute of Statistics. The teams were commissioned to complete three HIA case studies – two at a national and one at a local level – on the following themes:

- the NUTR-HIA project on improving nutrition labelling in Portugal;
- reduction of salt (sodium) in bread and its contribution to a reduction in blood pressure levels in Portugal;
- adoption of recommendations on urban operations in the conversion of industrial areas with contaminated soil in Parque das Nações.

The WHO Regional Office for Europe provided online consultancy to support the work of the three teams throughout the project during 2017–2019. Both quantitative and qualitative appraisal methods were employed in the case studies, leading to relevant and well justified concluding recommendations.

In January 2019 a second workshop was organized at INSA facilities to boost finalization of the three case studies. The final report of that workshop is provided in Annex 1.

During the third and final meeting of the HIA training programme on 13 December 2019, the three case studies were presented in a policy dialogue (Annex 2). Overall, the case studies provided substantial evidence on the HIA process, data sources and usefulness of existing tools (including screening and scoping tools) and methods (such as risk assessment) to conduct an HIA. Short abstracts of the three case studies are provided below, and the full reports are available with open access (Caldas de Almeida & Costa, 2020; Graça et al., 2019; Noronha et al., 2019, Noronha, 2022). Furthermore, the HIA training programme delivered a significant number of outputs – including various presentations in scientific meetings and other publications – that were subsequently disseminated widely (Feteira-Santos et al., 2020; 2021; Namorado et al., 2019; Santos et al., 2021).

It should be noted that the groups worked in English and not in their native Portuguese. Nevertheless, the major obstacles reported by participants during practical execution of the case studies were:

- data access, especially access to disaggregated data at the local level;
- intersectoral collaboration related to different terminology and technical terms; and
- the types of tools and technical approaches used in different ways by different sectors.
In the meantime, some methodological guides and papers were published, reflecting the evolution of HIA in Portugal, as tools for public policies assessment (Bacelar-Nicolau, Heitor & Pereira Miguel, 2018; Pereira Miguel, Bacelar-Nicolau & Heitor, 2023).

These valuable efforts and initiatives have prepared the way for regular implementation of HIA and other assessment methodologies to inform decision-making and reduce health and social inequalities in Portugal.

The following sections summarize the pilot case studies on HIA undertaken during the capacity-building project. The focus of the summaries is on the HIA process the pilot case studies used, as the project was following a problem-based learning approach. The HIA steps are:

- **screening** – identifying whether an HIA is needed and likely to be useful;
- **scoping** – planning the HIA, including identification of potential health risks and benefits, communities and subgroups likely to be affected, stakeholder concerns and available data sources;
- **appraisal** – assessing the health impacts, including the baseline health status of affected communities and vulnerable populations, and existing conditions influencing health;
- **reporting** – disseminating the findings to decision-makers, affected communities and other stakeholders;
- **decision-making and recommendations** – developing and formulating conclusions and recommendations; and
- **monitoring and evaluation** – collecting information to monitor health outcomes and evaluation of the HIA process as well as of the impact or outcome of the PSPPP on health.

A more detailed description of steps in the HIA process can be found in section 4.2, and the full project reports are publicly available (Caldas de Almeida & Costa, 2020; Graça et al., 2019; Noronha et al., 2019).

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3.2.1 HIA case study 1. The NUTR-HIA project on improving nutrition labelling in Portugal

The case study aimed to develop recommendations for endorsement of a front-of-pack nutrition labelling (FOP-NL) system by the Portuguese health authorities from a comprehensive and prospective HIA.

Noncommunicable diseases, such as cardiovascular diseases and diabetes, are increasing worldwide, accounting for more than 70% of all deaths and almost half of premature deaths globally (WHO, 2018). Most of the health burden of noncommunicable diseases is caused by diet-related risk factors – including pre-obesity and obesity, high fasting plasma glucose or systolic blood pressure (Gakidou et al., 2017) – which are avoidable by modifying dietary choices (Afshin et al., 2019).

Nutrition labelling is considered a pivotal strategy for controlling noncommunicable diseases because it can act as a determinant of adequate food choice at the moment of purchase (Hawkes et al., 2015). In Portugal, different food industry operators use several FOP-NL systems, and at the time of the case study no single system had been adopted by the Portuguese Government.

The DGS considered it important to assess the potential health impacts of adoption of a single culturally appropriate FOP-NL system, which would support promoting healthy food choices, as well as minimizing inequities in these. At the screening stage, the project proposal was refined by defining its aim to support the Portuguese Government in the endorsement of a unique FOP-NL system. Potential impacts of the proposal on different health determinants were described using a pathway model, and vulnerable population groups most likely to be affected by the proposal were identified (Feteira-Santos et al., 2021).

To manage the HIA, an advisory team was established, comprising members with several areas of expertise within the DGS – including nutrition, nursing, health care administration and statistics. At the scoping stage, a core team responsible for execution of the HIA was set up, comprising researchers with expertise in nutrition, psychology and health sociology. The workplan for the HIA
was decided, and a policy analysis of national and international FOP-NL systems was conducted, to define which systems should be assessed in the HIA.

At the appraisal stage, a mixed-method approach was implemented, comprising a systematic literature review, focus groups (two with experts and three with citizens), in-depth face-to-face interviews with five selected stakeholders, and a cross-sectional randomized controlled telephone survey and online questionnaire with a random sample of the Portuguese population. (Further details on the approach and the results can be found in Feteira-Santos et al., 2020; 2021 and Graça et al., 2019.)

The results of the mixed-method approach were summarized in a project report and presented, among other information, at the final project policy dialogue with decision-makers, stakeholders and other affected groups. The report also included a set of recommendations with expected outcomes if applied (Feteira-Santos et al., 2021).

For future monitoring of implementation of the proposal, a set of indicators was developed. Overall, the project team evaluated the HIA process as a valuable approach through which a mixed-method approach could be used that collected a broad range of scientific evidence and could inform the decision-making process.

Furthermore, the project group identified the following strength of the HIA method (Feteira-Santos et al., 2021):

- The involvement of stakeholders, a key strategy of a HIA process, allowed to involve citizens, experts and representatives of the F&B [food and beverage] industry, food retailers and regulatory agencies, as all these social actors have contextual knowledge that could lead to the provision of relevant insights about the potential impact of the proposed policy. Furthermore, they could also contribute to the identification of population subgroups that may be differently affected by the proposal, thus anticipating the need to consider particular details during its implementation, in such a way that can lead to increased health gains and reduced social inequalities.
3.2.2 HIA case study 2. Reduction of salt (sodium) in bread and its contribution to a reduction in blood pressure levels in Portugal

Portugal is among the European countries with the highest mortality rates from stroke, and cardiovascular disease represents the main cause of death (IHME, 2017). Hypertension – recognized as a major risk factor for development of cardiovascular disease – is also one of the most relevant modifiable risk factors for reversing this condition (Stevens, 2017). One strategy to modify blood pressure and its impact on hypertension is to reduce salt content in food (Graça, 2013).

The Portuguese Ministry of Health recognized dietary risk factors as the leading preventable cause of noncommunicable disease morbidity and mortality (Ministry of Health, 2018). One of the principal approaches taken was to reduce salt content in bread (Secretary-General of the Ministry of Health, 2017; Goiana-Da-Silva, 2019). A collaborative agreement (referred to as “the Protocol”) was signed between the DGS, INSA and associations of industrial bakeries, pastries and similar. This co-regulation agreement established a phased and progressive reduction of salt in bread until 2021, with a final goal of 1.0 g maximum salt content per 100 g. The Protocol also set up a communication/awareness campaign to advocate for salt intake reduction and to promote consumption of bread with lower salt levels at a national level.

The main objective of the HIA was to evaluate the potential impacts of the Protocol, with the reduction of salt (sodium) in bread and its potential reduction on blood pressure in the Portuguese population, with a focus on equity. Its specific objectives were to:

- identify and characterize the potential impact on blood pressure from a reduction of salt in bread;
- promote commitment to involvement among the various stakeholders;
- propose recommendations, based on the evidence produced, for further action to raise population awareness about the need for a reduction of salt content in bread, to contribute to health gains.
The overall conclusion of the screening stage noted the importance of the Protocol in relation to the potential health gains, since it could have a direct impact on reducing blood pressure among the population. Thus, the working group considered that health impacts were likely to occur and agreed to proceed with the HIA.

During the scoping stage, the workplan was established, setting out the most relevant parameters to consider in the design of the HIA. Two working groups were formed to oversee governance of the study: the HIA project team and the steering group. The latter was an advisory group of stakeholders whose mission was to validate the selected HIA parameters and the pilot study timeline proposed by the project team, and to provide guidance and scientific and technical support to the HIA process. It included stakeholders from the salt and bread industry (Salexpor, Northern Bakery, Pastry and Similar Industry Association, Portuguese Distribution Business Association and Federation of the Portuguese Agri-Food Industry), the DGS’s National Programme for Cerebro-Cardiovascular Diseases, INSA and other sectors of society including education (Directorate-General of Education) and consumers (Portuguese Association for Consumer Protection). There was general agreement on the terms of reference (Caldas de Almeida et al., 2018) and the Protocol that framed the decision-making process of the steering group.

The scoping stage also identified the key health areas and population groups likely to be most affected by the policy measures set out in the Protocol. To select the impacts to address during the assessment stage, a causal chain was drawn up, and a pathway between bread consumption and potential health and economic effects proposed. Identification and prioritization of potential impacts were agreed as follows:

- first, a study of the potential impact of the reduction of salt content in bread on blood pressure and cardiovascular disease, in an equity perspective;
- next, a study of the potential economic impact of health interventions targeting reductions in blood pressure and cardiovascular disease;
- last, a study of the potential impact on families’ behaviour and dietary habits of reduction of salt in bread on school-age children (6–18 years).

Finally, there was overall agreement on the timing (prospective) and level (rapid) of the HIA to be conducted.

Various methodological approaches were used for the appraisal. Data collected from two national surveys (the National Food, Nutrition and Physical Activity Survey and the National Health Examination Survey) were used to provide different but complementary information, necessary to achieve the objectives of this study (Lopes et al., 2017; Baretto et al., 2016). As both surveys contained important data for the appraisal, but because the data could not be linked directly, the team decided to overcome this barrier by aggregating data from the National Health Examination Survey by sex, age group, region and educational level. The corresponding average salt consumption for each stratum was then estimated. This allowed the project team to estimate the average blood pressure for each group and to merge them with the National Food, Nutrition and Physical Activity Survey data. Subsequently, a unique database was produced, with current values of salt intake from bread, blood pressure and corresponding expected estimates after implementation of the Protocol measures to reduce salt content in bread (Santos et al., 2021).

Since the Protocol not only set new targets for salt content in bread commercially available in stores but also set out ways of promoting the nutritional composition of bread provided in
schools, an online survey was created to analyse the potential impact on families’ behaviours and the dietary habits of school-age children. The survey aimed to measure knowledge of and attitudes towards the amount of bread consumed in family and school contexts, and to identify potential changes in eating habits. This was an observational, direct and cross-sectional survey, targeted at parents or guardians of children and young people aged 6–18 years enrolled in selected school groups in the Health Centres of Central Lisbon, Almada-Seixal area.

The results of the HIA were summarized in a project report and presented with the developed recommendations, among other information, at the final project policy dialogue with decision-makers, stakeholders and other affected groups (Caldas de Almeida & Costa, 2020).

According to the project team, it is crucial that studies are carried out of the possible impacts of actions taken on the various health outcomes, in order to design the appropriate policy framework and to inform political decision-making. The project team (Santos et al., 2021) concluded that:

Adequate design of food policies could significantly benefit from the systematic use of HIA to meet the objectives set in the agenda to promote health and prevent non-communicable diseases. In this context, HIA could be a key methodological tool to support significantly the alignment of national strategies with the priorities established internationally, namely by WHO and European Commission.
3.2.3 HIA case study 3. Adoption of recommendations on urban operations in the conversion of industrial areas with contaminated soil in Parque das Nações

An urban operation was carried out to expand CUF Descobertas Hospital, which included construction of a building with six floors above ground and five floors below ground. The work took place in the land formerly occupied by the Cabo Ruivo of Petrogal refinery, which had been decommissioned before Expo 98, the World’s Fair held in Lisbon in 1998. During this process, it was verified that much of the area in question had not been remediated, contrary to what had been advertised by Park Expo, the entity responsible for the management of this location: the Parque das Nações (Radu, 2018).

The subregion of Parque das Nações lies within the municipalities of Lisbon and Loures and was created in 2012. Alongside an extensive residential area, it offers several service and recreational areas. Parque das Nações is part of the Group of Health Centres (GHC) of Central Lisbon, which includes 12 health centres.

Once the contaminated soil was detected at the construction site, the Portuguese Environment Agency set up a technical committee to follow up on the hospital expansion and investigate the reconstruction work. This committee produced a report with a set of recommendations covering three phases of the urban planning project (APA, 2017):

- the preparation phase, including mandatory assessment of both the quality of the soil and the risk to the population and the environment;
- the licensing and communication phase, including execution of a plan to decontaminate the soil and the adoption of risk management measures in situations where the risk on acceptable for human health and the environment;
- the implementation phase, including work in relation to waste, underground water quality, wastewater, air quality environment and occupational health/health and safety at work, inspection and auditing.
The HIA was undertaken to analyse the real or potential impact of adoption of the technical commission’s recommendations. Its aim was to study the actual or potential health impacts resulting from adoption of the recommendations. The specific objectives were to:

- identify and characterize the health impacts caused by the existence of contaminated soils, according to the goals established in the recommendations for urban operations in areas with contaminated soils;
- propose measures to familiarize developers in urban areas with the potential health gains resulting from the decontamination of contaminated soils;
- develop technical knowledge and methodology adapted to the national context on contaminated soils;
- promote commitment and involvement of the various stakeholders;
- propose new recommendations for development of appropriate legislative measures.

At the screening stage, the options for the HIA were assessed, the target population was identified, the study area was defined, the health status indicators were chosen, and a screening tool was applied. The result of the screening was that the working group should proceed with the HIA after some adjustments to the proposal.

At the scoping stage, members of the steering committee were identified, and its functions were defined – including helping with collection of relevant information for the HIA, supporting the HIA working group in interpretation of the risk appraisal results, reviewing the final HIA report and evaluating the contribution of each organization involved. Furthermore, the terms of reference for the HIA were defined, the research strategy was developed, the key deliverables were identified, an evaluation strategy was developed, and the HIA workplan was defined.

A stakeholder analysis was conducted to identify relevant stakeholders and create an initial analysis of their value, expertise and willingness to contribute. A stakeholder mapping exercise was also performed to facilitate evaluation of the expertise and willingness to participate of the relevant stakeholders identified.

In addition, a set of health determinants to be considered in the appraisal stage was defined, as the area contained a high concentration of schools – including nurseries and kindergartens – and several areas for outdoor sport and cultural activities, parks and other public spaces.

For the appraisal, a conceptual exposure pathway model was first developed. This included the likely sources of contamination removed; the routes of contamination, with infiltration of possible spills in the upper layers and their transport to lower levels reaching groundwater; and the future users of the site (the residents and workers who would participate in construction of the new structures). Based on a review of different exposure assessment methods for human health risk assessment of contaminated land, which discussed both monitoring and modelling of human exposure, a conceptual risk model was defined. The main health determinants that would be influenced by urban operations in the reconversion of industrial areas with contaminated soil were also identified.

Furthermore, a risk assessment of the main contaminants detected during the expansion phase of the hospital on the exposed population was undertaken, and their potential health effects were quantified through a carcinogenic risk assessment approach. (Further details on the different stages of the HIA and the risk assessment results can be found in Noronha et al., 2019.)
The results and recommendations of the pilot HIA study were summarized in a project report and presented, among other information, at the final project policy dialogue with decision-makers, stakeholders and other affected groups (Noronha et al., 2019).

Importantly, the report also discussed the limitations of the pilot HIA.

- It was difficult to define the study area, since Parque das Nações has a relatively large geographical spread, and a significant part of it was the result of urban rehabilitation after deactivation of large chemical companies, and therefore possibly subject to other types of intervention prior to the HIA.
- The information available at the subregional level was limited to characterization of the resident population. This was hampered by the fact that Parque das Nações was only created in 2012 out of different subregions, hindering the construction of long-term health-effect series because of a lack of available data.
- It was difficult to obtain accurate health data, as much of the population in the study area used private rather than public health services. Further difficulties arose in obtaining data on the working population in the study area; data on the population using the study area for leisure activities; and environmental data on soil and air parameters related to soil quality (volatile organic compounds), since the air quality monitoring network does not include this type of parameter.
- The HIA received no funding, and the time frame for completion was short.

In line with the conclusions of the EIA undertaken by the APA that existing risks associated with contaminated soils are reduced through remediation, the HIA project team supported the recommendation to implement appropriate legislation in Portugal to protect populations from the risk of exposure to contaminated soil (Noronha et al., 2019). The project team also recognized that other sources of exposure besides contaminated soil – such as water and air – could have been included in the appraisal, as other health effects may exist beyond this exposure.

The project team concluded that the HIA highlighted “the positive health gains/effects on the resident population resulting from adoption of the APA recommendations. This effect will be more noticeable in the paediatric population” (Noronha et al., 2019).
4. Resources and tips for further HIA implementation in Portugal – a pathway

A major outcome of the collaborative work undertaken within the HIA training programme was creation of a joint “pathway for implementation of HIA in Portugal”. The pathway is a product of the two-year collaboration of institutions involved in the HIA training programme created by INSA and supported by the WHO Regional Office for Europe, as described in section 3.2. It provides detailed key policy and technical proposals for how to enhance full implementation of HIA in terms of both technical issues (tools, guidance and capacity-building) and institutions (for example, through an HIA support unit).

The original pathway for HIA implementation was presented at the launch of the project in November 2017. Its aim was to provide technical and policy advice for future activities to enable full implementation of HIA in Portugal. Section 4.1 gives an overview of the topics that could be covered by HIA, while section 4.2 describes the stages of the HIA process. The pathway combines knowledge from HIA implementation literature, implementation theory and experience from the three case studies, including the direction of implementation (top-down and/or bottom-up).

4.1 Possible key topics for HIA in Portugal

The national strategy for implementation of HIA proposed by the Commission for National Public Health Reform created in 2016 defined the following objectives:

- to analyse the actual or potential health impact of the adoption of legislative measures, with special regard to the health priorities defined in the relevant year’s National Health Plan;
- to analyse the actual or potential health impact of adoption or implementation of national, regional or local policies (and possibly strategies), plans, programmes or projects – in particular with regard to defined national, regional or local health priorities, as appropriate.
Since the intention is to integrate HIA into the implementation processes for these plans while delimiting their scope, criteria related to national, regional or local health priorities should be used, with particular emphasis on key determinants of health, such as:

- tobacco consumption;
- food and nutrition;
- physical activity;
- mental health;
- environmental factors;
- health literacy;
- provision of health care;
- provision of innovative technologies in health;
- provision of social services;
- urban planning; and
- allocation of financial resources at the central and local levels.

Based on existing experience with HIA globally and recent efforts of international organizations following the EIA Directive (Cave et al., 2020), proposals influencing access and affordability of health and social services in particular should be mandated for HIA. Provision of innovative health technologies should be assessed not through HIA but through health technology assessment, which provides specific tools – including economic assessments.

Depending on allocation of financial resources at the national and local levels, further modifications could be made to the list of key topics for HIA in Portugal. The list could be issued via an HIA ordinance of the Ministry of Health to establish a legal mandate for HIA in Portugal.

### 4.2 Stages of the HIA process

As described in Chapter 3, Portugal has almost 20 years of history of discussing HIA, but systematic implementation has not yet started. The following sections provide key policy and technical proposals for the main stages of HIA on how to complete this implementation process.

Four alternative types of HIA can be performed, depending on the time and resources available: desktop, rapid, intermediate and comprehensive HIA (Joffe & Mindel, 2005; Harris County Public Health, 2021).

- **Desktop HIA** is performed when good data sources (registry data, epidemiological data and published reports) are available, and only one or two determinants of health have been identified. Desktop appraisal is often undertaken internally by the organization leading the HIA, such as the HIA support unit or the Ministry of Health.

- **Rapid HIA** is usually performed for an individual project where more than one determinant of health is involved. In this case data are still easily accessible from routine data sources such as local, regional or national statistics units, databases and registries; the whole process can be completed within a week or two.

- **Intermediate HIA** is linked to a higher level of documentation, such as plans and strategies, and involves more determinants and health outcomes. In some cases it relays on new data
collection, but most of the work can still be done within the municipality with little external help and support.

- **Comprehensive HIA** is usually needed for more comprehensive policies, projects and plans involving many different determinants of health and a range of possible health impacts. Registry, epidemiological and published data are used, but there is often a need to collect new data specific to the subject and/or to use the data collected by other assessment processes such as environmental assessments. This increases the time and general resource requirements and requires use of additional – most often external – capacities from outside the municipality.

It is important that “each HIA should be proportionate to the time available, resources, proposal complexity and compliance requirements” (Pyper et al., 2021). No matter which type of HIA is performed, there commonly are six stages in the HIA process: screening; scoping; appraisal; reporting; decision-making; and monitoring and evaluation (Fig. 3).

**Fig. 3. Stages of the HIA process**

- **Screening** helps to determine whether an HIA is needed and likely to be useful.
- **Scoping** develops a plan for the HIA, including identification of potential health risks and benefits; communities and subgroups likely to be affected; stakeholder concerns; and available data sources.
- **Assessing** draws on multiple data sources; describes the baseline health status of affected communities; identifies vulnerable populations; and describes existing conditions that influence health.
- **Recommending** develops recommendations that are feasible in the political, economic, regulatory and technical context of the PSPPP being assessed.
- **Reporting** disseminates the findings to decision-makers, affected communities and other stakeholders.
• **Monitoring and evaluation** involves process, impact or outcome evaluation and collecting information to monitor and inform each type of evaluation.

Resources box 1 outlines where to find general information on HIA, tools and further resources for HIA. Implementation tips box 1 indicates what could be undertaken at the policy and technical levels to implement HIA. Each of the following sections covering the individual stages of the HIA process also concludes by setting out useful resources and implementation tips.

Importantly, although HIA is depicted as a linear process in Fig. 3 above, the outcomes of each stage can lead to loops back, which may require an adjustment of the scope of the assessment and the alternatives to be addressed. Furthermore, stakeholder engagement should be undertaken at an early stage; it should be maintained through the whole process and not just introduced in the final stage when the HIA results are presented (for example, at a public hearing).

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**Resources box 1. General information on HIA, tools and further resources**

- The WHO Regional Office for Europe webpage on HIA contains a general description of HIA, reports and experience of using HIA, as well as other useful links (WHO Regional Office for Europe, 2022b).

- The Environment and Health Impacts Hub website of the University of Liverpool contains case studies shared by users (University of Liverpool, 2022).

- The Wales Health Impact Assessment Support Unit (WHIASU) website provides information on HIA; its process as practised in Wales, United Kingdom; guidance; reports; news; and information on recent developments in HIA (WHIASU, 2022).

- The Society of Health Impact Assessment Practitioners (SOPHIA) is one of the largest HIA professional communities, whose website contains an archive of publication and provides practical guides for practitioners (SOPHIA, 2022).

- The European Public Health Association (EUPHA) website provides information about European HIA events and networking opportunities (EUPHA, 2022).

- The IAIA website provides practical guidance and training resources, as well as a list of key citations of impact assessments (IAIA, 2022). The IAIA also hosts and organizes events around the world.

- The HIA Connect website (University of New South Wales, 2018) has an archive of HIA reports and contains training and guidance documents.

- The Health Impact Project website provides information, toolkits and other resources for HIA to advance health-informed decisions (PEW Charitable Trusts, 2022).

- The National Collaborating Centre for Environment and Health (NCCEH) website provides HIA information, practices and procedures (NCCEH, 2022).

- The National Collaborating Centre for Healthy Public Policy (NCCHPP) website provides HIA information including guidelines, tools and a free online course (NCCHPP, 2022a).
**Implementation tips box 1. General tips on HIA implementation**

**Policy**
- An intragovernmental committee should be established to ensure that the impact on health is always considered as part of any intragovernmental consultation process.
- Inclusion of HIA in public health legislation via an ordinance of the Ministry of Health should be considered. This would allow implementation of HIA on top-down principles, and would also provide guidance to municipalities and regions to implement HIA on bottom-up principles.
- An act implementing the EIA Directive should update the EIA legislation already in Portugal’s public health legislation, or a combined act on HIA and EIA/SEA could be developed and passed. This could be done via an ordinance of the Ministry of Health, as noted above.
- A national HIA support unit should be established by legal mandate as part of an existing institution.

**Technical**
- Necessary resources should be provided for the work of an HIA support unit within the institution.

### 4.2.1 Screening

The purpose of screening is to determine whether an HIA is needed and whether it can usefully contribute to the decision-making process for the proposed PSPPP. HIA screening tools include consideration of relevance of the proposed PSPPP to health and whether it is possible for the HIA to contribute to the decision-making process.

HIA screening is commonly undertaken within or across agencies using a short HIA screening tool either developed for a specific country or municipality or borrowed from existing publicly available HIA screening tools.

HIA screening should be carried out even when a proposed PSPPP states that health issues are addressed. The screening process can help to identify the strengths of the proposal and systematically identify health issues that may not yet have been considered, such as the broader determinants of health or particular population groups that are likely to be affected by the proposal. For these reasons, screening is important even in cases when HIA is mandated, whether it is a standalone HIA or part of an EIA/SEA. The ordinance of the Ministry of Health proposed in Implementation tips box 1 should make screening mandatory for all proposals addressing any of the areas listed or combinations thereof.
The three types of HIA screening tools to determine whether an HIA is required are:

- a checklist, including a set of simple questions with yes/no answers;
- a screening questionnaire, where more detailed questions with open-ended answers are required;
- a screening matrix, where a table is used to score answers to questions based on a pre-determined scoring system.

The issues the HIA screening tool should address include:

- the size of the economic, environmental, social, cultural or health importance of the proposed PSPPP;
- whether, and by how much, the proposed PSPPP is likely to enhance health outcomes;
- whether, and by how much, the proposed PSPPP is likely to contribute to adverse health outcomes;
- whether these enhanced or adverse health outcomes are likely to be short-, medium- or long-term;
- whether, and by how much, these enhanced or adverse health outcomes are likely to affect specific population groups;
- which of the determinants of health the proposed PSPPP has an impact on;
- whether the HIA will be considered useful by decision-makers leading the proposed PSPPP;
- whether sufficient time is available for the HIA to be undertaken to assist in the decision-making process for the proposed PSPPP;
- whether resources are available to undertake the HIA; and
- whether the health outcomes from the proposed PSPPP are already being assessed by another institution or agency.

A number of HIA screening tools are publicly available (Resources box 2). It may, however, be appropriate to develop an HIA screening tool specific to Portugal’s national or regional/local decision-making contexts. For the pilot case studies, all three groups used the screening and scoping tool developed by the Irish Institute of Public Health (Metcalfe, Higgins & Lavin, 2009) and found it suitable for the Portuguese context. Ideas for implementation are compiled in Implementation tips box 2.

HIA screening tools are generally quite short – no longer than four or five pages long. The tool should be clear and concise, and be written in non-technical language able to be understood by academic and government institutions. HIA screening tools can be piloted by various agencies before being finalized.

The benefits of developing an HIA screening tool include contributing to greater collaboration between research institutions and government agencies, ensuring that HIA is undertaken within specific decision-making contexts, and building HIA capacity in the agencies involved in the tool’s development process.
**Resources box 2. HIA screening tools**

Publicly available HIA screening tools can be found in:

- WHO’s Health Impact Assessment Toolkit for Cities (WHO Regional Office for Europe, 2005);
- the screening guide within the Public Health Institute for Ireland’s HIA guidance (Pyper et al., 2021);
- the screening tool and record sheet within WHIASU’s practical guide to HIA (Chadderton et al., 2011);
- the screening checklist for better integration of health in EIAs in line with the EIA Directive (Cave et al., 2020);
- the NCCHPP HIA screening grid (NCCHPP, 2022b); and
- the Mental Well-being Impact Assessment Toolkit by the United Kingdom’s National Mental Health Development Unit (Cooke et al., 2011).

**Implementation tips box 2. HIA screening**

**Policy**

- The existing intragovernmental consultation process should be used to apply the screening tool.

**Technical**

- A national screening tool for policy-level HIA should be developed, with a focus on national health policy priorities and the Sustainable Development Goals (SDGs).
- Screening tools for project-level HIA should be developed with EIA/SEA experts, or suggested existing screening tools from EIA/SEA processes could be used, adding health determinants and equity/distribution issues to impact-related questions.

**4.2.2 Scoping**

The purpose of the scoping stage is to develop a plan for the HIA. A steering group with the support of a lead agency that undertook the screening stage commonly oversees an HIA. The agency (which could be the support unit or a consultancy company or other institution) that undertook the screening stage usually establishes an HIA working group involving key stakeholders, and leads the scoping stage by organizing an initial meeting with stakeholders and experts. The working group and the steering group are in close contact during the process. In the three Portuguese case studies, the working groups consisted of 7–11 experts whereas the steering groups/advisory boards were a little smaller, with 6–8 members. The number of members of both groups depends on the size of the assessed proposal and the expected type of HIA (desktop, rapid, intermediate or comprehensive). Stakeholder analysis should be conducted as an important aspect of the scoping process, with stakeholders identified as described below.

At this first meeting, three issues are often discussed and agreed on by the group:

- the conceptual and contextual issues relevant to the HIA;
• the establishment of the HIA steering group; and
• the terms of reference of the HIA.

HIA is always linked to a specific political, cultural or societal context, so discussion about the context and the concept of HIA are important tasks of a steering group. Some HIA context issues that could be discussed are:

• the proposed policy;
• what aspects of the proposal need further consideration, as a result of the screening;
• what specific health impacts the HIA should focus on;
• the aim and objectives of the HIA;
• the expectations of decision-makers, proponents of the proposal, the public and interest groups;
• the definition of health to be used; and
• any other assessments that are being or have been undertaken related to the proposal.

Some of the demographic and health profile context issues that could be discussed are:

• what geographical area the HIA will cover;
• the current health status of the municipality as whole and population groups of interest; and
• which population or community groups will be influenced.

Some of the institutional context issues that could be discussed are:

• interests for or against the proposal, and the strength of evidence on potential health impacts;
• how the proposal fits into the larger policy context;
• the institutional context, and how HIA can connect with it; and
• who is involved in decision-making process.

Once the format of the steering group or advisory board has been decided, it should manage and lead the whole HIA process in technical terms. The following issues are the responsibility of the steering group:

• the entity responsible for the HIA;
• the key experts involved;
• the timescale and deadlines;
• accountability mechanisms;
• human and financial resources;
• presentation and dissemination of results;
• legal issues, including copyright.

The third element of scoping needs to decide which determinants of health, health outcomes and population groups are to be included in the appraisal stage. Development of causal diagrams or pathways to facilitate clear identification of these, as well as the questions for risk assessment and appraisal, is a key step in this stage.
The steering group should discuss:

- what methods will be used in the HIA and why;
- the criteria used to select those impacts that should be subject to more in-depth assessment;
- the research and evidence to be used;
- whether existing evidence can readily be applied;
- whether it is feasible to collect new evidence; and
- how the HIA will be monitored and evaluated.

In addition, a stakeholder analysis needs to be undertaken, and steps for stakeholder engagement need to be decided. A stakeholder is any individual, group or organization that is affected by the outcome of a project or business venture. They have an interest in the success of the project and can be within or outside the organization sponsoring the PSPPP. Stakeholders are important because their decisions can have a positive or negative influence on the project. The support of critical/key stakeholders is needed for the project to exist.

A number of international conventions and treaties set out information about consultation – for example, the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (UNECE, 1998). A lack of meaningful engagement can therefore result in delays to or even cancellation of the PSPPP. Meaningful engagement should be free from manipulation and appropriate to the risks posed by the PSPPP. It should also use appropriate communication with the various stakeholder groups. Importantly not all groups require the same level of intensity or engagement through the lifecycle of the PSPPP.

The steering group should discuss:

- which stakeholders need to be involved (politicians, decision-makers, relevant public sector professionals and affected communities);
- how stakeholders should be involved in the HIA;
- how stakeholders should be consulted about their views, experience and expertise;
- prioritization of stakeholder involvement, based on their relative power and interest at each phase of the PSPPP if needed; and
- verification of representatives of different groups.

The results should be summarized in a stakeholder engagement plan.

Resources box 3 gives examples of HIA scoping tools; ideas for implementation are compiled in Implementation tips box 3.

### Resources box 3. HIA scoping tools

Publicly available HIA scoping tools can be found in:

- the scoping guide within the Public Health Institute for Ireland’s HIA guidance (Pyper et al., 2021);
- the scoping checklist within WHIASU’s practical guide to HIA (Chadderton et al., 2011);
- the section on scoping health as a topic in EIAs in line with the EIA Directive (Cave et al., 2020);
Resources box 3. contd

- the NCCHPP HIA scoping tool (NCCHPP, 2022b); and
- the article “Prioritizing health: a systematic approach to scoping determinants in health impact assessment” (McCallum, Ollson & Stefanovic, 2016).

Information about causal pathways and diagram development can be found in:

- the Wikipedia entry on causal models (Wikipedia, 2022);
- the article “Causal diagrams in systems epidemiology” (Joffe et al., 2012); and
- the publication *Assessment of population health risks of policies* (Gulis et al., 2014).

Stakeholder analysis and engagement are covered in:

- the Inter-American Development Bank technical note on meaningful stakeholder engagement (Kvam, 2019);
- SOPHIA stakeholder engagement tools and materials (SOPHIA, 2022b);
- stakeholder engagement plans based on the environmental and social policy and performance requirements and the briefing note on stakeholder engagement under COVID-19 conditions of the European Bank for Reconstruction and Development (EBRD, 2008; 2020);
- the United Nations Environment Programme’s stakeholder engagement handbook (UNEP, 2020); and
- the online form Impact – stakeholder analysis (Manchester Metropolitan University, n.d.).

Implementation tips box 3. HIA scoping

**Policy**

- The existing intragovernmental consultation process should be used to apply the scoping tool.

**Technical**

- A national scoping tool for policy-level HIA should be developed, with a focus on national health policy priorities and the SDGs.
- Scoping tools for project-level HIA should be developed with EIA/SEA experts, or suggested existing scoping tools from EIA/SEA processes could be used, adding health determinants and equity/distribution issues to impact-related questions.
- A thorough stakeholder analysis should be conducted to facilitate meaningful engagement of stakeholders at an early stage and throughout the process.
4.2.3 Appraisal

The appraisal stage is central to the HIA process. It uses quantitative or qualitative processes to assess the likely impacts on the health of the population resulting from a proposed PSPPP.

4.2.3.1 Risk assessment and appraisal

During the scoping stage of the HIA, the likely positive or negative health impacts of the proposal are identified. Some or all of these impacts, and their determinants, may be chosen to move to the risk assessment and appraisal stages. If the working group itself does not have the capacity to complete the risk assessment, with the agreement of the steering group this task can be outsourced to an external institution, such as a national environmental centre, public health centre or consultancy-based experts. The ability to conduct risk assessment can be established based on scientific track record or via a licensing system established as part of lifelong learning system. The findings of the risk assessment are then appraised by the HIA working group and/or steering group for their relevance to the proposed PSPPP, including how likely the risk is, how big it is and how many people it will affect.

4.2.3.2 Quantitative and qualitative analyses

HIA can involve quantitative or qualitative analyses, or a combination of these. Quantitative assessment examines the association between a change in a specific determinant of health and the identified health outcome either at the total population level or by subpopulation groups. Qualitative assessment leads to an in-depth understanding of how the PSPPP may affect the health of populations through the involvement of stakeholders and the affected population/subpopulation groups, gathering local knowledge and/or identifying the risk perception of the affected population. Different methods may be applied (such as interviews, focus groups and consultation meetings), and the sample size is usually much smaller than for quantitative analyses.

Resources box 4 gives examples of assessment methodologies and data sources; ideas for implementation are compiled in Implementation tips box 4.

**Resources box 4. HIA appraisal**

Assessment methodology can be found in:

- the WHO human health risk assessment toolkit: chemical hazards (WHO & International Programme on Chemical Safety, 2010);
- the health risk assessment chapter of Environmental risk assessment: approaches, experiences and information sources (EEA, 2020);
- the United States Environmental Protection Agency’s human health risk assessment website (EPA, 2022);
- the New South Wales Ministry of Health’s health risk assessment website (NSW Health, 2022).
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Resources box 4. contd

Data sources are available at:

- the Institute of Health Metrics and Evaluation’s GBD Compare website (IHME, 2022);
- the ToxTutor website (University of California, Davis, 2021);
- PubChem (National Center for Biotechnology Information, 2022); and
- International Agency for Research on Cancer (IARC) monographs on the identification of carcinogenic hazards to humans (IARC, 2022).

Software tools include:

- the AirQ+ software tool for health risk assessment of air pollution (WHO Regional Office for Europe, 2020);
- the Carbon Reduction Benefits on Health tool (WHO Regional Office for Europe, 2018b);
- WHO’s health economic assessment tool for walking and cycling (WHO Regional Office for Europe, 2022c);
- WHO’s health equity assessment toolkit, which includes software for exploring and comparing health inequalities in countries (WHO, 2020);
- the Dynamo-HIA tool (RIVM, 2022); and

- For qualitative tools, see Resources box 3 on stakeholder analysis and engagement.

Implementation tips box 4. HIA appraisal

Policy

- A system for professional recognition of risk assessment expertise should be established as a qualification to conduct risk assessment for HIA (licensing, lifelong learning, scientific credit and so on).

Technical

- An overarching database should be developed to include all available national data sources in Portugal and those relevant for Portugal internationally; it should be made available for potential users at the local, regional and national levels.
- Specialized training on risk assessment for HIA practitioners should be developed with university partners.

4.2.4 Reporting

A core stage in the HIA process is documenting it. An HIA report usually contains a summary of the screening and scoping stages, followed by a more detailed section on the appraisal stage, with concluding recommendations and a monitoring and evaluation report. An HIA report may be
written for different audiences such as decision-makers, technical institutions or the communities likely to be affected by the proposed PSPPP.

4.2.4.1 Elements of an HIA report

An HIA report should contain the following:

- a short description of the proposed PSPPP;
- a description of the HIA screening tool used (which could be included as an appendix to the report if it is a new tool);
- the results of the HIA screening decision, regardless of whether or not it involves proceeding with an HIA;
- a short description of the scoping stage, including:
  - terms of reference;
  - working group composition;
  - steering group composition;
  - stakeholder analysis and involvement;
  - likely health impacts resulting from the proposed PSPPP assessed in the report;
  - determinants of health focused on during the HIA process; and
  - population groups likely to be most affected by the proposed PSPPP;
- a short description of the appraisal stage, including the data used, the analysis performed and how any predictions of health impacts were made – including uncertainties (if relevant);
- recommendations resulting from the HIA process to the lead agency proposing the PSPPP; and
- a monitoring and evaluation plan.

4.2.4.2 Issues to consider in preparing an HIA report

Factors to consider when drafting the HIA report include:

- the report's audience – it may be important to consider whether the report is for decision-makers (for example, a policy brief document), technical institutions as part of an approval process (as in the case of HIA within EIA/SEA) or communities (as an advocacy or community-led HIA), and whether separate reports may be needed for each audience;
- the language used in the report, which should be appropriate to the relevant audience;
- the structure and length of the report – it should be concise to ensure that it is easy to read and that readers are able to orient themselves to its different parts;
- the format of the report, which should ensure that readers find it easy to read;
- the data used in the report – to help orient the reader, use of maps, graphs, figures and tables relating to the various aspects of the proposed PSPPP or the likely health impacts could be considered;
- dissemination of the report – the key institutions or groups the report should be given to, and whether any confidential issues need to be assessed in its distribution;
• the costs associated with report preparation, which should have been included in the HIA process;
• actual or potential conflicts of interests or ethical issues – these should be clarified within the report;
• the ownership of the report – this should be clear to readers, including any differences between the authors of the report (such as an academic institution) and the institution who commissioned the report.

A health authority will not often undertake the impact assessment itself; it will receive a report and will have to assess the quality of the work undertaken. For this task a checklist a should be developed, and the relevant staff members who will assess the quality of the report need to be trained.

Resources box 5 gives examples of HIA reports and two quality assurance frameworks; ideas for implementation are compiled in Implementation tips box 5.

### Resources box 5. HIA reporting

- Model HIA reports are available at:
  - the Environment and Health Impacts Hub website (University of Liverpool, 2022);
  - the SOPHIA website (SOPHIA, 2022c); and
  - the WHIASU website (WHIASU, 2022).
- Quality assurance of the HIA report and its process can be found at:
  - the quality assurance review framework for HIA developed by WHIASU (Green et al., 2017); and
  - the review package for assessing the quality of HIA reports of development projects (Fredsgaard et al., 2009).

### Implementation tips box 5. HIA reporting

**Policy**

- Templates or HIA policy briefs for policy-oriented HIA reports should be developed according to Portuguese legislative and government requirements.

**Technical**

- Templates for HIA reporting at different levels (municipal, regional and national) should be developed.
- The quality of HIA reports should be checked, using a formal checklist.

### 4.2.5 Decision-making and recommendations

HIA is strongly linked to the decision-making process at the relevant level (national, regional or local). One output of the HIA process is a set of recommendations to decision-makers about how to avoid negative impacts and enhance the health of populations likely to be affected by the proposed PSPPP. This could include recommendations that promote health (such as walking and
cycling measures in land-use decisions) or protect health (such as ensuring that changes to air quality resulting from a proposed PSPPP meet internationally recommended standards).

To ensure that the HIA will be able to support and influence the decision-making process, the timing of its implementation is important. Thus, a clear overview of the decision-making process and possible parallel running of other assessments such as EIA is needed from the beginning of the HIA process.

Fig. 4 gives an overview of how the HIA process can be linked to the policy cycle. To be relevant for decision-making, the HIA needs to seize a window of opportunity and provide the necessary information at the right time.

**Fig. 4. Linking the HIA process to the policy-making cycle**

Source: Bolte et al., 2012; Göpel et al., 2010; Therivel, 2010. Reproduced with permission from Verlag Hans Huber, Hogrefe AG, Bern with additional permission from the publishers of the original figures Mabuse-Verlag GmbH and Taylor and Francis Group, LLC, a division of Informa plc.

### 4.2.5.1 The decision-making context

The HIA working group usually develops the HIA recommendations and discusses them with the steering group. Both groups should be aware of the time frame for the decision-making process, the institutional structures of the main stakeholders involved in the HIA; the formatting requirements of the agency leading the proposed PSPPP; and the way different environment, health or other institutions relate to each other. Much of this information is gathered during the scoping stage, so it should be possible to incorporate it into the decision-making stage.

Decision-makers should be provided with the following information from the HIA working group prior to creating specific recommendations:

- the aim of the HIA;
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- the overall choice of options, including a no action option;
- a concise summary of the findings from the HIA risk appraisal stage;
- an overall message of the findings from the HIA, formulated as recommendations.

4.2.5.2 Elements of a recommendation

The recommendations from an HIA process aim to propose adjustments or offer alternatives to a decision-maker from a proposed PSPPP. They should be developed by the HIA working group, taking into consideration the views of all relevant stakeholders – including decision-makers, experts, the public and HIA process participants.

An HIA recommendation should include:
- who the recommendation is directed at;
- the action associated with recommendation;
- which other agency or institution might need to be involved to action the recommendation;
- the time frame for implementation of the recommendation; and
- who should, if required, monitor and evaluate the implementation of the recommendation.

Resources box 6 gives examples of HIA model reports; ideas for implementation are compiled in Implementation tips box 6.

Resources box 6. HIA decision-making and recommendations

- Model HIA reports are available at:
  - the Environment and Health Impacts Hub website (University of Liverpool, 2022);
  - the SOPHIA website (SOPHIA, 2022c); and
  - the WHIASU website (WHIASU, 2022).

Implementation tips box 6. HIA decision-making and recommendations

Policy
- Recommendations should reflect the priorities of the country’s current National Health Plan.
- The HIA reports and the decisions made should be made publicly available.

Technical
- Writing sessions should be included in HIA capacity development training programmes, with the aim of developing skills for the reporting, decision-making and recommendation stages of HIA.
- A short policy brief should be developed for decision-makers, containing the main findings and recommendations.
- Information about uncertainties in the assessment should be made clear.
- A communication strategy should be developed.
4.2.6 Monitoring and evaluation

The final stage of the HIA process involves both monitoring and evaluation.

4.2.6.1 Monitoring

Monitoring collects data to inform subsequent evaluation. Table 1 gives examples of the types of variables and their data sources that could be used to monitor health outcomes as part of an HIA evaluation.

Monitoring should be planned and prepared at the risk appraisal stage of HIA, as indicators to measure the changes in determinants of health, risk factors and health outcomes are established and collected at that stage.

**Table 1. Examples of types of variables and their data sources**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Reporting unit</th>
<th>Collecting unit</th>
<th>Reporting frequency</th>
<th>Source of data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cars per day (recent)</td>
<td>Traffic department</td>
<td>Health profile group</td>
<td>Monthly</td>
<td>Data registry</td>
</tr>
<tr>
<td>Number of cars per day (planned)</td>
<td>Traffic department</td>
<td>Health profile group</td>
<td>Monthly</td>
<td>Data registry</td>
</tr>
<tr>
<td>Traffic injuries</td>
<td>Emergency services and police</td>
<td>Health profile group</td>
<td>Monthly</td>
<td>Hospital and police records</td>
</tr>
<tr>
<td>Noise levels</td>
<td>Environmental unit</td>
<td>Health profile group</td>
<td>Six-monthly</td>
<td>Data registry</td>
</tr>
<tr>
<td>Time spent driving</td>
<td>Professional truck driver association</td>
<td>Health profile group</td>
<td>Six-monthly</td>
<td>Association files, working time reports</td>
</tr>
<tr>
<td>Air pollution levels</td>
<td>Environmental unit; mainly expressed as NO\textsubscript{x} and PM\textsubscript{10} levels</td>
<td>Health profile group</td>
<td>Monthly</td>
<td>Data registry</td>
</tr>
<tr>
<td>Fatal injuries</td>
<td>Emergency service and police</td>
<td>Health profile group</td>
<td>Monthly</td>
<td>Hospital registry, policy records, mortality registration</td>
</tr>
<tr>
<td>Sleeping disturbance</td>
<td>Health unit</td>
<td>Health profile group</td>
<td>Annually</td>
<td>Population survey</td>
</tr>
<tr>
<td>Leisure time</td>
<td>Social service unit</td>
<td>Health profile group</td>
<td>Annually</td>
<td>Population survey</td>
</tr>
<tr>
<td>Chronic bronchitis</td>
<td>Health unit</td>
<td>Health profile group</td>
<td>Six-monthly</td>
<td>Hospital data</td>
</tr>
</tbody>
</table>

Note: NO\textsubscript{x} = nitric oxide and nitrogen dioxide; PM\textsubscript{10} = particulate matter with an aerodynamic diameter smaller than 10 µm.
4.2.6.2 Evaluation

Evaluation of an HIA uses the data gathered during the monitoring stage. It can incorporate three forms:

- process evaluation, which assesses the process of carrying out the HIA and its fidelity to any applicable best practice or standards;
- impact evaluation, which focuses on the impact of the HIA on the decision-making process; and
- outcome evaluation, which assesses how implementation of the final decision affects health or determinants of health (such as air quality).

Resources box 7 gives resources for evaluation and examples of data sources for monitoring and indicators; ideas for implementation are compiled in Implementation tips box 7.

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**Resources box 7. HIA monitoring and evaluation**

Learning resources for evaluation include:

- HIA monitoring and evaluation guidelines (Wisconsin Public Health Association, 2014);
- standard evaluation models, theories and frameworks, such as the RE-AIM framework (Sweet et al., 2014);
- standards for programme evaluation of the Joint Committee on Standards for Educational Evaluation (Yarbrough et al., 2010).

Example data sources for monitoring, indicators and similar can be found at:

- the WHO European Health Information Gateway, which includes country profiles, data and indicators (WHO Regional Office for Europe, 2022d);
- the WHO air quality guidelines, with reference values on particulate matter, ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide (WHO, 2021);
- data, country profiles, maps and indicators on the European Environment Agency website (EEA, 2022); and

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**Implementation tips box 7. HIA monitoring and evaluation**

**Policy**

- National health statistics variables and data collection systems should be reviewed and updated periodically, and data availability issues considered at the local, regional and national levels.
Implementation tips box 7. contd.

**Technical**
- Experience from conducted HIA should be summarized, and updates of national health and general statistical systems recommended.
- If possible, standard data collection tools should be used to monitor potential changes in health outcomes predicted in the assessment.
- A process evaluation should be conducted to improve future HIA methodology, based on the experience.

### 4.3 Policy and technical steps of the roadmap

Systematic implementation of HIA in Portugal requires policy steps (illustrated in Fig. 5) and technical steps, both of which are summarized below.

**Fig. 5. Flowchart of policy steps to advance HIA in Portugal**

- **Intragovernmental committee**
- Ordinance of the Ministry of Health on HIA
- Inclusion of EIA Directive 2017/52/EU into public health legislation
- National HIA support unit
- National tools (screening and scoping) and templates for policy-oriented HIA reports
- HIA capacity-building programme and HIA database
- Professional recognition system and HIA experts database
The policy steps are:

- establishing an intragovernmental committee to ensure that the impact on health is always considered as part of the intragovernmental consultation process;
- considering inclusion of HIA in public health legislation by issuing an ordinance of the Ministry of Health on HIA – this would allow implementation of HIA on top-down principles and provide guidance to municipalities and regions to implement HIA on bottom-up principles;
- transforming the Portuguese act implementing the EIA Directive in public health legislation or developing a separate act on HIA and integration of health into EIA/SEA – this could also be done via an ordinance of the Ministry of Health;
- establishing a national HIA support unit via legal mandate as part of an existing institution, with a regular budget for staffing and activities;
- once developed, applying the screening and scoping tools in intragovernmental consultation processes;
- developing templates or HIA policy briefs for policy-oriented HIA reports or policy briefs according to Portuguese legislative and governmental requirements;
- establishing a system for professional recognition of risk assessment expertise, as a qualification to conduct risk assessment for HIA (licensing, lifelong learning, scientific credit, and so on); and
- periodically reviewing and updating national health statistics variables and data collection systems, and considering data availability issues at the local, regional and national levels.

The following technical steps describe the tasks delegated to the national HIA support unit:

- organizing continuous training of HIA experts, either directly (conducting periodical training workshops) or in collaboration with existing university programmes on public health;
- developing and publishing HIA guidelines in Portuguese, including translation and context modification of screening and scoping tools such as the Irish tools of 2009 used in the three case studies or in the updated guidance of the Irish Institute of Public Health (Pyper et al., 2021);
- managing a national database of conducted HIA studies;
- serving as a consultation unit to municipalities, regions and other usually non-health governmental institutions, as well as private and non-profit organizations aiming to conduct HIA;
- strengthening existing whole-of-government consultation processes to improve how health is considered in government decision-making;
- actively engaging in consultations with the National Institute of Statistics and other relevant data providers, and discussing how to harmonize data collection and availability to facilitate use of internationally available software for risk assessment, such as the Contaminated land exposure assessment (CLEA) tool (Environment Agency, 2015), the Dynamo-HIA tool (RIVM, 2022) – a tool to quantify the health impact of policies influencing health determinants – and other similar software;
- seeking close collaboration with the EIA/SEA community in Portugal and internationally, with the aim of further improving assessment of population health impacts within EIA/SEA; and
• following the technical tips in the Implementation tip boxes in this report at each stage of HIA process.

Further discussion is needed on where to locate an HIA support unit in Portugal. It would be advisable to establish a unit that is linked to the policy-making and decision-making processes but that also can act independently: it will be expected to make recommendations to the units responsible for these processes and to act as a guardian of HIA processes. Hence, it should be a relatively independent unit, but one knowledgeable about both technical areas and the policy-making process. Examples of such HIA impact assessment support units include WHIASU, which is part of Public Health Wales in the United Kingdom, and the Andalusian HIA network at the regional ministry of health and in the subregions of Andalusia, Spain (WHO Regional Office for Europe, 2019; WHIASU, 2022).

5. Conclusions and furthers steps for HIA implementation

Based on the experience from the three HIA case studies and collaboration between INSA and WHO, key steps for systematic implementation of HIA in Portugal were developed. One of the proposals was establishment of a committee to ensure that impacts on health are always considered as part of the intragovernmental consultation process. In this context, inclusion of HIA in public health legislation via an ordinance of the Ministry of Health – in addition to an ordinance to implement the EIA Directive in national EIA legislation – could be highly beneficial. Establishment of a national HIA support unit through a legal mandate as part of an existing institution with good knowledge and experience of the HIA process would be a positive step to promote sustainable HIA implementation. This unit should be responsible for ensuring the organization of continuous training of HIA experts from various sectors; development and publication of guidelines; and management of a national database of conducted HIA studies. It should also serve as a consultation unit to municipalities, regions and other usually non-health
government institutions, as well as private and non-profit organizations aiming to conduct HIA, among other tasks.

The policies and technical steps described in detail in Chapter 4 were considered both important and decisive for effective HIA implementation in Portugal to support assessment of potential impacts on human health within environmental assessments. This is mandated in every EU country, with the entry into force of the EIA Directive. Several Member States in the WHO European Region have already established legal obligations for HIA, but in the majority of countries HIA is conducted voluntarily (Vohra, Nowacki & Martuzzi, 2016). Meanwhile, in many countries – including Portugal – legal obligations for environmental assessments exist. These include the need to assess impacts on human health and on the population, as defined in the EIA Directive and the SEA Directive, as well as the Espoo Convention and the SEA Protocol (see section 2.2). Public health authorities need to be prepared not only to assess the impacts of a PSPPP on the health sector but also to engage in environmental assessments.
References


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1 All references accessed 20–21 February 2023.
Enabling the implementation of health impact assessment in Portugal


Enabling the implementation of health impact assessment in Portugal


Enabling the implementation of health impact assessment in Portugal


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Enabling the implementation of health impact assessment in Portugal


WHO Regional Office for Europe (2018a). Health impact assessment (HIA) and health in environmental assessments: enhancing HIA practice in Portugal: 13–15 November 2017,
Enabling the implementation of health impact assessment in Portugal


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Scope and purpose

The importance of assessing the health implications of policies, plans, programmes and projects in different sectors has been long established. Health 2020 – the European policy framework adopted by Member States in the WHO European Region in 2012 – re-emphasized the need for a whole-of-government and whole-of-society approach. Health impact assessment (HIA) can play a crucial role in this by supporting decision-makers within and outside the health sector to address health impacts and inequalities, and to ensure the health of future generations through identification and estimation of possible impacts of proposed policies and activities. HIA can thus play an important role in achieving the Sustainable Development Goals.

The Ministry of Health of Portugal, through the Directorate-General of Health (DGS), is in the process of proposing a new Government Bill (no. 49/XIII) that defines the competencies of the country’s public health services. These competencies include, among others, assessment of potential health impacts of proposed legislative acts. Therefore, as a first step, an implementation model for HIA in Portugal is proposed by the Commission for National Public Health Reform to assess policies in any sector and their potential impact on health and well-being.

The potential for health gains through implementation of HIA for policies, plans, programmes and projects is great. Several Member States in the WHO European Region have already established legal obligations, but in the majority of countries HIA is conducted voluntarily. Meanwhile, in many countries (including Portugal) legal obligations are in place for environmental assessments, which include the need to assess impacts on human health and on the population, as defined in European Union directives on environmental impact assessment (Directive 2014/52/EU) and on strategic environmental assessment (Directive 2001/42/EC), and through the Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context of the United Nations Economic Commission for Europe. Public health authorities need to be prepared not only to assess the impacts of policies, plans, programmes and projects of the health sector but also to engage in environmental impact assessment.

To support further development of HIA in Portugal, the Ministry of Health, with the National Institute of Health Dr Ricardo Jorge (INS), organized a first workshop with the support of the WHO European Centre for Environment and Health in Bonn, Germany. It was held at INS facilities in Lisbon, Portugal, on 13–15 November 2017. At the first workshop, three case study groups were established to conduct a pilot HIA on three different themes:

- HIA of the NUTR-HIA project on improving nutrition labelling in Portugal, led by Pedro Graça (National Programme for the Promotion of Healthy Eating, DGS);
• HIA of a reduction of salt (sodium) in bread and its contribution to a reduction in blood pressure levels in Portugal, led by Luciana Costa (Department of Health Promotion and Noncommunicable Disease Prevention, INSA); and
• HIA of the adoption of recommendations on urban operations in the conversion of industrial areas with contaminated soil in Parque das Nações, led by Vera Noronha (Regional Health Administration of Lisbon and Tagus Valley and Commission for National Public Health Reform).

Objectives

The overall objective of the second workshop was to discuss the progress of the three case studies and support their completion. It was attended by the case study working groups. It consisted of lectures, open discussion sessions and group work. Participants were encouraged to engage in interactive discussions and exchanges.

The expected outcomes of the workshop were:
• further development of the case studies;
• agreement on completion of the final phases of the HIA implementation collaboration;
• an initial discussion about development of HIA guidance for Portugal.

Overview of the workshop

29 January

Teresa Caldas de Almeida, on behalf of the Director of INSA, and Marco Martuzzi, on behalf of the WHO European Centre for Environment and Health in Bonn, Germany, welcomed participants and opened the workshop.

The morning sessions refreshed participants’ knowledge of key concepts of HIA and the overall HIA process. Examples of the three case studies were used to refer to the screening and scoping stages of the HIA process and to reflect on the appraisal stage. The importance of developing causal diagrams or pathways to facilitate clear identification of questions for risk assessment and appraisal was noted as a key issue. A risk assessment exercise was provided, using an example of chemical contamination in the environment. Problems with access to data and tools, and the usefulness of the Dynamo-HIA software tool were discussed. All three groups conducted an exercise to develop causal diagrams for their case studies.

The issue of stakeholder involvement was addressed, using examples from the three case studies. Discussion took place about the differences between the steering group for the HIA processes and stakeholder involvement. An international report-writing tool, based on an HIA quality assessment report, was also presented. General principles of report writing and communication of HIA findings to different target audiences were discussed.

The afternoon sessions mostly focused on discussion of HIA and decision-making, different types of HIA, differences between HIA and health technology assessment, and basic issues around the content of the expected guidance document for developing HIA in Portugal.
30 January

Opening of the second day, Marco Martuzzi introduced Jo Jewell from the WHO Regional Office for Europe, who works on nutrition and health issues and gave an introductory review of the work of the Regional Office on nutrition, with a focus on two issues covered by the HIA case studies – salt intake and labelling. The three case study groups then presented on progress made. All three had completed screening and scoping, and were entering the appraisal stage. All welcomed the previous day’s discussion about causal diagrams, finding it very helpful for more concrete definition of risk appraisal themes. The WHO team provided input to each case study according to the team’s needs.

All three cases studies were due to be completed by summer 2019, and a suggestion was made that a final workshop could be conducted before then, at which the case studies would be presented, including a policy dialogue. The final project report will take into account the implementation plan for HIA in Portugal presented at the first workshop in November 2017.

The workshop concluded with an open discussion and question and answer session, in which the case study groups discussed their plans and raised technical questions with the WHO experts on nutrition and contaminated sites in relation to the appraisal stage.

After the workshop, participants were provided with an electronic folder including:

- all PowerPoint presentations and group exercises;
- the scope and programme of the workshop;
- the list of participants;
- reference sources (files including websites, published paper references and HIA guidance).

Conclusions – final remarks

The workshop was conducted in a very positive and enthusiastic atmosphere. Participants agreed that supervision of the three case studies would continue via email and potential online meetings. The expectation was that the three case studies should be completed before July 2019, and a final workshop with a policy dialogue might be organized in June or early autumn 2019 in Lisbon, Portugal.
### Workshop programme: HIA implementation in Portugal

#### Tuesday 29 January

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<th>Session</th>
<th>Speaker(s)</th>
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<tr>
<td>09:30</td>
<td>Welcome and refresher on development of HIA</td>
<td>Teresa Caldas de Almeida, Department of Health Promotion and Noncommunicable Disease Prevention, INSA; Marco Martuzzi, WHO Regional Office for Europe</td>
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<tr>
<td>09:45</td>
<td>Session 1: recap of HIA key concepts and terminology</td>
<td>Marco Martuzzi and Julia Nowacki, WHO Regional Office for Europe; Gabriel Gulis, University of Southern Denmark</td>
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<tr>
<td></td>
<td>• Recap of the HIA process</td>
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<td>• Appraisal – a risk assessment example from contaminated sites</td>
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<tr>
<td>11:30</td>
<td>Session 2: recap of HIA key concepts and terminology – continued</td>
<td>Julia Nowacki, WHO Regional Office for Europe; Gabriel Gulis, University of Southern Denmark</td>
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<tr>
<td></td>
<td>• Stakeholder engagement in HIA</td>
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<td>• Reporting and quality assessment of HIA</td>
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<td>• Communicating results to policy-makers and the public: planning public presentations of results</td>
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<tr>
<td>13:30</td>
<td>Session 3: HIA pros and cons</td>
<td>Marco Martuzzi, WHO Regional Office for Europe; Gabriel Gulis, University of Southern Denmark</td>
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<td></td>
<td>• Assessing health impacts from human risk assessment and health technology assessment to policy analysis, programme evaluation and HIA</td>
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<td>• The role of HIA in supporting decision-making</td>
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<td>15:00</td>
<td>Session 4: recap of the project process and outline of HIA guidance for Portugal</td>
<td>Marco Martuzzi and Julia Nowacki, WHO Regional Office for Europe; Gabriel Gulis, University of Southern Denmark</td>
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<td></td>
<td>• What needs to be included in the future HIA guide?</td>
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<td>• What (further) support needs to be developed for HIA implementation?</td>
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<td>• Problems encountered with HIA</td>
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<td>• When to use HIA and when to use other approaches</td>
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#### Wednesday 30 January

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<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>09:00</td>
<td>Session 5: nutrition and health</td>
<td>Marco Martuzzi and Jo Jewell, WHO Regional Office for Europe</td>
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<td></td>
<td>• Overview of work on nutrition in the WHO European Region and Portugal</td>
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<tr>
<td>09:15</td>
<td>Session 6: the three HIA case studies – a short recap of the process and further discussion of issues encountered in the three working groups</td>
<td>Marco Martuzzi and Julia Nowacki, WHO Regional Office for Europe; Gabriel Gulis, University of Southern Denmark</td>
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<td>11:00</td>
<td>Session 6 continued</td>
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<td></td>
<td>• Continued discussion in the three working groups</td>
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<tr>
<td>12:30</td>
<td>Session 7: Next steps in the case study projects – who does what by when?</td>
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<tr>
<td>14:00</td>
<td>Session 8: Continuation of the working groups [if needed]</td>
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Scope and purpose

The importance of assessing the health implications of policies, plans, programmes and projects of different sectors has been long established, and there is great potential for health gains through implementation of health impact assessment (HIA) to address potential negative and positive health implications. HIA is a structured process to strengthen the consideration of health in a proposed policy, programme, project or plan in any sector. It brings together quantitative and qualitative methods. HIA is an important methodological approach that brings to life the whole-of-government approach and the health in all policies concept.

Portugal has gained experience of HIA, and the Ministry of Health, through its the Directorate-General of Health (DGS), proposed a new Government Bill (no. 49/XIII) defining, among others, assessment of potential health impacts of proposed legislative acts as a competency of the country’s public health services. To support this, as a first step, an implementation model for HIA in Portugal was proposed by the Commission for National Public Health Reform to assess policies in any sector and their potential impact on health and well-being. In addition, under the coordination of National Institute of Health Dr Ricardo Jorge (INSA), and with the support of WHO Regional Office for Europe, the project on enhancing HIA practice in Portugal developed three pilot HIA case studies in cooperation with the DGS and the Regional Health Administration of Lisbon and Tagus Valley:

- HIA of the NUTR-HIA project on improving nutrition labelling in Portugal, led by Pedro Graça (National Programme for the Promotion of Healthy Eating, DGS);
- HIA of a reduction of salt (sodium) in bread and its contribution to a reduction in blood pressure levels in Portugal, led by Luciana Costa (Department of Health Promotion and Noncommunicable Disease Prevention, INSA); and
- HIA of the adoption of recommendations on urban operations in the conversion of industrial areas with contaminated soil in Parque das Nações, led by Vera Noronha (Regional Health Administration of Lisbon and Tagus Valley and Commission for National Public Health Reform).

Based on the experience of the case studies a roadmap for further HIA implementation in Portugal has been developed.

Objectives

The overall aim of the workshop was to raise awareness of the importance of the work among various stakeholders, with the goal of supporting implementation of HIA and health assessment in environmental assessments in Portugal by:

- showcasing the three case studies;
- presenting a roadmap for HIA implementation in Portugal; and
- discussing the possibilities for HIA implementation through a policy dialogue with representatives of different sectors and institutions.
Overview of the workshop

Cristina Abreu Santos, on behalf of the Board of Directors of INSA, opened the workshop and welcomed participants. Teresa Caldas de Almeida, from INSA’s Department of Health Promotion and Prevention of Noncommunicable Diseases, and Julia Nowacki, on behalf of the WHO European Centre for Environment and Health in Bonn, Germany, gave a short introduction to the workshop, summarizing the programme.

The first session included a presentation of the three HIA case studies developed during the HIA training programme launched by the INSA in 2017 in the context of the Biennial Collaborative Agreement between WHO and the Portuguese Ministry of Health. All the speakers gave an overview of the different stages developed through the overall HIA process using a “learning by doing” approach, and presented the results of the studies. A discussion with all participants in the workshop ensued.

The second session involved a public presentation of the roadmap for implementation of HIA in Portugal, based on the experience gathered during the various activities and exchanges with the multiple stakeholders involved in the two-year capacity-building HIA training programme. This provided key policy and technical recommendations to complete HIA implementation through an effective guided approach. The policies and technical steps highlighted were considered crucial for effective HIA implementation in Portugal to support assessment of potential impacts on human health within environmental assessments. It was noted that public health authorities need to be prepared not only to assess the impacts of policies, plans, programmes and projects of the health sector but also to engage in environmental impact assessment (EIA). Participants in the capacity-building project acknowledged that a series of workshops on the topic, together with supervised case studies, was crucial for further development of HIA in Portugal.

The final session consisted of a policy dialogue, moderated by Cristina Abreu Santos from the INSA Board of Directors, with representatives of various sectors and institutions. The aim was to discuss opportunities for HIA implementation in Portugal.

The complex nature of HIA was highlighted by one participant, who called HIA an “institution itself”. In this context, it was suggested that it would be helpful to develop a glossary of key terms, and to harmonize the terminology across sectors. This highlighted the need identified in the first workshop in 2017 to make uniform the language used across different areas of activity – particularly when approaching HIA and EIA. The urgency of this need to facilitate and promote communication and cooperation between sectors, especially in recognition of HIA as a clear multidisciplinary task, was noted.

The opportunity for HIA to be used as a tool to establish dialogue between various ministries, highlighting its decentralization power, was also noted. Alongside the divergent technical language and different views on how to classify concepts, the presence of several barriers and difficulties when efforts are made to integrate health professionals in EIA procedures was noted. These included availability of personnel, who were often serving in different functions at the same time, making dialogue between parties difficult; this also raises issues associated with meeting the tight time requirements demanded by ongoing processes. Finally, formal education and systematic training was pointed out as an urgent need, as HIA requires a specialized workforce with a broad, holistic view of health.
Attendees also stated that environmental policy already covers – in most cases – concerns about human health by addressing the environmental determinants of health, and EIA already recognizes human health. However, improvements in this area still seem to be necessary, especially when addressing indirect impacts. In fact, it was noted that the revised EU EIA Directive 2014/52/EU establishes human health as an environmental factor, paving the way for more detailed assessment of impacts. The legal mandate to assess human health impacts thus gives HIA an important legal power.

Within the health sector, it was stressed that public health departments are essential focal points to link health with a variety of stakeholders. The importance and relevance of the public health observatories (public health units in primary health care) was noted; these should be enriched by HIA know-how and competences. Nevertheless, although public health departments and observatories were recognized as having a leadership role in implementation of HIA, there was broad consensus about the benefit of setting up a formal HIA support unit that would coordinate implementation and development of tools and methods in Portugal. This could assemble necessary expertise and experience in the country, and might serve as a focal point for interested professionals and the public across local, regional and national levels. It should also collect information about case studies and create a catalogue of data.

In addition, the need to replicate case studies at other scales (regional and local) and different levels of disaggregation was reinforced. Further, the requirement to include the private sector was noted, since it often has to undertake assessments or needs to be involved in them – for example, in planning proposals.

Some attendees noted that additional work needs to be done on establishment of significance criteria for different impacts, prioritization of impacts and synergies of different impacts, and that a clear relationship between impacts and the policy assessed should be identified. Criteria to assess the quality of individual assessment reports also need to be established. It was suggested, for example, that the high-quality health data held within the health sector should be opened to assessment processes.

It was further stated that HIA should have clearly defined terms of reference, including a focus on implementation of recommendations of assessments and monitoring of impacts. Recognition of the important role of the mandatory nature of HIA to give a new dimension and greater responsibility to the process was noted by some participants.

In general, attendees agreed that HIA could be implemented efficiently and successfully if many professionals could work together in a multidisciplinary approach. Consensus that HIA is a holistic health and well-being model for policy support was also reached.

Overall, the main results of the policy dialogue focused on the need to promote intersectoral work and establishment of sustainable and continuous dialogue to facilitate HIA culture, implemented in a systematic way. The pilot project – consisting of workshops, accompanying pilot case studies and intersectoral policy dialogues – confirmed the importance of HIA development in Portugal, not only within the health sector but also better integrated into existing procedures such as EIA.
Enabling the implementation of HIA in Portugal – programme

13 December 2019, Lisbon, Portugal

8:30 Welcome
Cristina Abreu Santos, Member of the Board of Directors of INSA

9:00 Session 1: presentation of the three pilot HIA case studies
Julia Nowacki, WHO Regional Office for Europe; Teresa Caldas de Almeida, INSA
- HIA of the NUTR-HIA project on improving nutrition labelling in Portugal
- HIA of a reduction of salt (sodium) in bread and its contribution to a reduction in blood pressure levels in Portugal
- HIA of the adoption of recommendations on urban operations in the conversion of industrial areas with contaminated soil in Parque das Nações

10:25 Discussion of the pilot study results

11:15 Session 2: public presentation of the roadmap for implementation of HIA in Portugal
Gabriel Gulis, University of Southern Denmark; Julia Nowacki, WHO Regional Office for Europe

11:35 Session 3: policy dialogue
Moderator: Cristina Abreu dos Santos, INSA Executive Board
Panel:
- Nuno Lacasta, President of the Portuguese Environment Agency
- Luís Pisco, President of the Regional Health Administration of Lisbon and Tagus Valley
- Pedro Graça, DGS
- Miguel Cardo, on behalf of the Director-General of Food and Veterinary Medicine
- Ana Morais, representing the President of the Commission for Regional Coordination and Development of Lisbon and Tagus Valley

12:30 Discussion

13:15 Conclusions
Julia Nowacki, WHO Regional Office for Europe; Gabriel Gulis, University of Southern Denmark; Teresa Caldas de Almeida, INSA

13:30 Closing session
Fernando de Almeida, Chair of the Board of Directors of INSA
The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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