



# Housing and health regulations in Europe

**Summary document**



**Supported by the convention between  
The French Ministry of Health  
and  
World Health Organization, Regional Office for Europe**  
with the support of the Municipality of Forlì, Italy  
and the Region Emilia-Romagna, Italy

## ABSTRACT

The aim of this review project was to look into the possibilities given by regulations to improve or protect health through improving housing conditions in seven European countries (Germany, Italy, Lithuania, Portugal, Hungary, The Netherlands and United Kingdom). Two questionnaires have been developed by WHO/Euro for gathering the information on a) the main principles of the regulation regarding housing and health as well as the actors involved in its design and b) on specific housing threats.

Based on the results gathered through these questionnaires and drawing from the project report, this summary identifies selected findings of the project and indicates where and how the regulatory framework could be improved or is lacking. In the conclusion part, the project addresses policy options that could help the European Ministries responsible for health and for housing to design their future regulation and/or action plans in the field of housing.

The detailed project report and the questionnaires used for data collection can be found at: [http://www.euro.who.int/Housing/20070115\\_1](http://www.euro.who.int/Housing/20070115_1)

### Keywords

HOUSING - legislation and jurisprudence - standards  
PUBLIC HEALTH - legislation and jurisprudence  
RISK FACTORS  
ENVIRONMENTAL EXPOSURE  
HEALTH STATUS  
GUIDELINES  
EUROPE

EU/07/5072456

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## Introduction

This project investigated the health basis of regulations for controlling housing conditions in seven European countries (Germany, Hungary, Italy, Lithuania, the Netherlands, Portugal, and England). The Housing unit of the Bonn Office of the World Health Organization European Centre for Environment and Health (WHO ECEH) undertook the project, supported by a convention between the French Ministry of Health and WHO Regional Office for Europe, and with additional support from the Municipality of Forlì, Italy and the Region Emilia-Romagna, Italy.

The project was underpinned by the acceptance that housing quality plays a decisive role in the health status of the residents. The construction materials used, the equipment installed, the size, and the design of the dwelling and the individual parts of it, affect health whether directly or indirectly. However, the health argument is usually not a key factor and forms of health impact assessment are rare.

Therefore, the project objectives were to identify the status of “health” in housing regulation through –

- Reviewing the main principles underlying the existing health related housing regulations;
- Identifying the administrative structure(s) involved in formulating, implementing and monitoring such regulations;
- Highlighting some of the most innovative and efficient regulations; and
- Identifying where the regulatory framework was lacking or could be improved.

## Key conclusions and Findings

The project concluded that –

1. Even though the relationship between housing conditions and health is recognised, the health sector or ministry does not appear to play a leading role in the design and implementation of regulations to control housing conditions.
2. There is very little and most often no intersectoriality in drafting the regulations. More emphasis has to be given to the protection and promotion of health and safety in housing standards and regulation.
3. Each country has its own priorities and its own specificities for developing its regulatory framework. There is very little or no international cooperation in this.
4. The degree to which the regulations are compulsory is very different from country to country.
5. For the same topic, there are different standards and different approaches. Health requirements are often set vaguely only.
6. Good regulatory systems are fundamental to achieving health improvements, and examples have proved this (e.g. on carbon monoxide).

Health considerations should be taken more into account in housing regulations. Based on these findings and discussions at a meeting of experts two general policy areas for governments are proposed –

1. *To improve housing regulations*, this project should be followed by actions to –
  - Develop and share good practice in incorporating health into housing regulations;

- Encourage and disseminate research on the efficiency and effectiveness of housing and health interventions e.g. benefits to health services and the economy;
  - Develop intersectorality in housing and health management;
  - Develop a mechanism for evaluating the efficiency of enforcement policies;
  - Strengthen the role of the EU with EU-wide regulations and standards in the field of housing and health
  - Harmonize the assessment of housing conditions and standard setting.
2. *When developing housing and health policies*, it is important that –
- Social aspects are taken into account with the needs of those on low incomes (such as lone parents, immigrants) addressed as a priority, recognizing the higher relative running costs of housing compared to total income
  - Attention is given to the more vulnerable members of society such as disabled people, children and older people; and
  - Incentives are developed to achieve the required results without the need to apply legal action

## Methodology

The project started in October 2004 with the development of two questionnaires. The information gained from the first questionnaire provided an overview of the main principles and aspects covered by housing regulations. This included information on –

- The Dwelling, including basic amenities, energy devices, indoor air quality, domestic water supply, the disposal of waste water and sewage, the layout and size of rooms, and responsibility for shared spaces.
- The Immediate Housing Environment, including access to public transport and green spaces and street and neighbourhood maintenance;
- Social aspects of Housing, including subsidising payments (rent and loans) and improvements, and the right to housing.

The second questionnaire concentrated on specific issues, such as the control of carbon monoxide (CO), home safety, lead, fire safety, pests, and external noise sources.

The questionnaires were administered in each country by a ‘focal point’ (a representative known to WHO) who identified the appropriate sources of information and coordinated the responses. The findings from these questionnaires were supplemented by information given at a meeting of experts held in June 2005 in Forlì, Italy.

## The diversity of Regulation and Control

Countries have adopted different approaches in an attempt to deal with the same issue. They may also have differing definitions, and the regulatory frameworks have developed differently.

The phrasing of regulations can be specific or vague, setting out either the result or the performance to be achieved. They can have a pass/fail approach, be directed to general or specific situations, or can grade conditions. Standards and regulations can be quantitative or qualitative. The quantitative standards are those referring to what should be present (e.g. a sink, cooking facilities etc.) or matters that should not be present (e.g. dampness). The qualitative approach states what should be taken into consideration when designing or assessing housing conditions based on the potential effect of those conditions.

The advantages of the specific and quantitative approach are that they are clear and easily understandable and just require setting a standard or guideline. This approach is particularly suited for the control of dwellings yet to be built. However, there are disadvantages, in that they are more difficult to update and are not ideal for the already existing housing stock.

The approach for the existing housing stock should be to improve or reduce any building problems or hazards, focusing on the qualitative assessment of the dwelling when the modern quantitative guidelines cannot be met.

Regulations can also vary according to the type of building (single-family houses or condominiums), according to the tenure (rented or owned) or according to the distinction between social housing and private housing. Tenure patterns varied between the subject countries, for example in Italy, 25% of dwellings were rented, in Lithuania over 87% of the housing stock was owner-occupied; in the Netherlands around 55% was owner-occupied. The proportion of social housing varies from country to country (as does the definition), for example Portugal has only a small social sector, while in the Netherlands it is a third of the total dwelling stock.

The development of the regulatory framework and associated standards will be influenced by a number of factors including constitutional, cultural, economic, climatic or political. A main factor determining responsibility for devising standards and regulations will be the administrative structure of a country (e.g. whether unitary or federal), and may also influence the responsibility for applying them (e.g. a national agency or a local municipality).

## General Differences

The approach adopted by the seven subject countries was primarily one of specific requirements within regulations, but even where minimum quantitative standards are set (e.g. size of rooms, and of windows) such standards differ from country to country, for example on the height of window sills discussed below. However England had adopted a purely qualitative approach for the assessment of conditions in existing housing, the Housing Health and Safety Rating System (HHSRS) – a hazard-based risk assessment approach. This System, rather than specifying any standard, requires an assessment of the potential threat from the condition, or the lack of adequate facilities or amenities and includes 29 potential hazards.

There is no agreement or consistency on the definition of a ‘dwelling’ although in most countries, control of ‘new’ dwellings was directed at those buildings yet to be constructed.

## Target of Controls

The regulations in the seven countries reported can target various aspects (not mutually exclusive). They can be directed to controlling –

- The immediate environment and neighbourhood;
- The materials used in construction;
- The design and layout of the dwelling itself;
- The amenities to be provided; and
- The use and maintenance of the dwelling and its basic equipment.

For each of these major targets of regulation and policies, key results are provided below.

## The Immediate Housing Environment

To some extent the location of housing is a land-use and planning issue, but the immediate environment and neighbourhood have influences on residents. It can be a source of problems such as noise, but it can also be a source of pleasure. Green spaces and safe public areas are important for aesthetic reasons and for giving opportunities for a healthy lifestyle.

In Italy and Lithuania there are national requirements on the provision of green spaces. While no countries appear to have promotional campaigns for cycling, in Italy, Lithuania and Netherlands it is compulsory to build a cycle path when a new road is built. On pedestrian safety, only in Germany is it compulsory to provide any street with a pavement.

Environmental noise can impact on the health of those living in dwellings affected. In all the countries noise from railways (but not tramcars) has been recognised as a potential problem and is controlled at national level. For other sources of noise, regulations exist in all the countries to control the source, but some are only for specific equipment and others are more generalised. There are also requirements in all countries for passive measures to attenuate sound transmission, generally for windows, walls and ceilings (these may be limited to new dwellings as in Lithuania). A registration system of complaints of noise nuisances in residential areas is compulsory in Italy, Lithuania, Portugal and England.

## Materials

As well as European standards for materials, national regulations have been developed to control the quality of materials used, and to prohibit or restrict the use of certain materials. This is the case for most countries, however, there are some notable differences – standards for the emission of VOCs from building materials and furniture are set in Germany and Lithuania; in Hungary, lead is forbidden in paint but not in water pipes; while in Italy, lead water pipes are prohibited.

## Design, Accessibility and Layout

Controlling the design and layout of the dwelling can include ensuring it is accessible for specific users such as children, the elderly, or those with physical limitations. Regulations ensuring accessibility exist in all countries except Hungary and Portugal, but where they exist, they often refer to specific rooms (bathrooms, sanitary accommodation, and kitchen). Generally, there do not appear to be specific regulations concerning accessibility by the elderly and very few regulations directed to the accessibility and use of the immediate housing environment.

The design of dwellings can affect the likelihood of accidents and unintentional injuries. The study found that only in Portugal and England is there an accepted definition of housing hazards which could result in physical injuries, and that records of injuries resulting from domestic accidents are kept only in Italy, Portugal and England. Three countries (Germany, Portugal and England) consider the use of both educational/awareness campaigns and technical requirements to reduce domestic accidents to be effective; while two others (Italy and the Netherlands) consider that the educational approach is more efficient.

The temperature of hot water is not regulated in the Netherlands and Portugal. In Italy there is a very specific requirement that hot water must be less than 48°C (+/- 5°C).

Controlling their design and maintenance can reduce falls on stairs. All surveyed countries require at least one handrail, however in some countries the need for a handrail can depend on



the length of the staircase – in Germany, for example, a handrail is needed for stairs with more than 5 steps, but in Lithuania a handrail is required regardless of the length or number of steps. Germany, Italy, England, The Netherlands and Lithuania all specify a minimum height for window-sills, but there is no consistency. In Germany, for buildings of less than 12 metres, sills must have a minimum height of 80 cm, while for buildings higher than 12 metres the minimum height is 90 cm. In Lithuania sills are to be 85 cm height in buildings up to 25 metres and 1.10 metre in buildings over 25 metres. Italy and England have one standard, at 1 metre and 1.10 metre respectively. The Netherlands only states that the sill should be “breast high”. The requirements are to reduce the likelihood of a fall, and so it is not apparent there should be such differences.

## **Basic Amenities**

Space for the preparation and cooking of food is required in every country except The Netherlands. In Germany it is required in both new and existing dwellings, but is only a requirement for new dwellings in Hungary, Italy, Lithuania and Portugal.

In all countries readily accessible sanitary accommodation is required. In some cases the requirements are performance based, in other cases design criteria are used, and sometimes they only apply to new buildings. The number of bathrooms and sanitary accommodation is regulated in every surveyed country with at least one bathroom and WC required.

## **Heating, Ventilation, Lighting, Water, etc**

Two countries, Italy and England, do not require the provision of electricity, and two countries, The Netherlands, and Portugal, do not require provision for space heating. In England regulations governing the construction of new dwellings control how space heating facilities, if provided, should be installed. For existing dwellings in England, the lack of effective space heating and/or thermal insulation resulting in threats to health from excess cold is assessed nationwide under the HHSRS. In contrast, Italy requires that indoor temperatures of 18-20°C can be achieved during cold season.

For ventilation and indoor air quality, there are two approaches – to set requirements for ventilation, and to regulate for specific pollutants. Ventilation rates are set in Italy, Lithuania and The Netherlands, while in England and Germany there is only an obligation for appropriate ventilation without specific standards.

Only Portugal reported that it did not have a list of indoor air pollutants subjected to regulation. One pollutant associated with energy and space heating is carbon monoxide, a product of combustion. This is recognised as a field of action in most of the surveyed countries (Italy, Lithuania, Germany, England and Hungary), and data collection processes on hospitalisation and fatalities due to CO have been developed in five countries (all except Germany and The Netherlands). In Hungary, gas appliances (e.g. stoves, water heating systems) without exhaust pipes can be installed if there is natural ventilation. CO detectors are not compulsory in any of the surveyed countries

Making natural light available within the dwelling and providing a view are important for the health of the occupants. This is usually controlled through setting standards for windows – usually a window to floor ratio. These range between 12,5% of the floor surface in Italy and 10% in the Netherlands. Italy also requires that the average daylight factor to be guaranteed in a room should not be less than 2% of the natural outside daylight. Only The Netherlands has

different values for existing and new buildings (a ratio of 10% for existing, and 0.5sq.metre for new buildings as a minimum). In England the potential risk to health from inadequate natural lighting or view can be assessed under the HHSRS. Regulations on the geographical orientation of new buildings (affecting both natural lighting and solar heat gain) exist only in three of the surveyed countries – Germany, Italy and Lithuania.

All the surveyed countries have regulations to ensure dwellings are provided with a drinking water supply. Water pipes and plumbing installations are regulated in all countries for new buildings, but for existing buildings in only Germany, The Netherlands and Lithuania. Connection to a public sewerage is compulsory in all countries except for England where there is only a general obligation to discharge wastewater into a suitable disposal system. In Portugal and The Netherlands certain rural areas are excluded from the requirement.

## **Pests Control, Fire and Management issues**

The extent of regulations aimed at pest control and elimination differs, as does the definition of what are pests, but most countries regulate pest infestations. In addition, notification of vector borne diseases is required at the national level in all the surveyed countries, but the number of such diseases subject to notification varies. Where a pest infestation can be attributed to poor sanitation and hygiene, these are seen as the responsibility of the landlord and/or the tenant. However, regulations do not appear designed or intended to promote pest prevention and management practices.

Fire safety is recognised as a field of action of the regulations of all countries involved in the survey, however death due to domestic fires (as a health threat) are registered in only four of the surveyed countries (Italy, Lithuania, Portugal and England) Most regulations seem to apply only to new buildings and few of the surveyed countries have awareness campaigns and emergency training aiming at preventing fires in the home. Emergency action plans exist only in Hungary and Italy. In Hungary in the case of multifamily apartment houses, the owners have to work out a fire emergency plan. Information on the non-compliance with regulations is not available.

Storage areas for waste in multi-occupied dwellings are compulsory in every country, with the exception of Italy. All countries, except the Netherlands, have regulations dealing with the maintenance and cleaning of shared spaces and the provision and upkeep of the multi-occupied residential buildings. The type of regulations varies nevertheless between the countries according to the predominant tenure status and tradition of dwellings in multi-occupational buildings.

## **Enforcement**

The ways of enforcement or of achieving compliance can be very different at national, regional and local level. In summary, the options include –

- Authorisations or permits, with or without conditions, before work commences;
- Penalties/sanctions, either financial or administrative (which seems to be most common); and
- Substitution, where the regulatory body carries out the work that should have been done.

To reduce the burden on authorities and to promote not only compliance with a minimum, ways of providing incentives to comply and improve need to be investigated.

As well as controlling conditions, there is the basic right to housing. Regulations guaranteeing the right to housing exist in some of the countries. In England, for example, local authorities must ensure that those who are unintentionally homeless are housed. As well as a right to

housing, there are some regulations recognising the right for that housing to be healthy. This may be through a reduction in the rent when repairs are necessary (a sort of compensation for the 'unhealthy condition'), or by requiring re-housing. In Lithuania a tenant can legally stop paying the rent while waiting for rehabilitation work, and overcrowded families must be re-housed in social housing. In Germany and the Netherlands a reduction of the rent has to be granted while repairs are being carried out, and in England the local authority can prohibit the use of unhealthy housing and must ensure that any displaced occupier is re-housed.

## Final Recommendations

1. Ministries of Health are often only marginal to housing regulation but should be more closely involved in formulating and implementing regulations aimed at safeguarding health and safety in the home.
2. The health relevance of the regulatory framework is lacking or only vaguely defined in many cases. Often, there is inadequate monitoring and recording of data on health and housing and the impact of unsafe housing e.g. injuries from domestic accidents and CO and also of compliance with regulations. Member States should therefore put arrangements in place to address these shortcomings. Such arrangements would also better inform actions to improve regulations and contribute to improved co-operation between countries.
3. Enforcement of regulations can be problematic and expensive even in new construction but preliminary authorization can be an effective way of securing better public health prevention and safety. Additionally legislators should consider the use of financial incentives for ensuring compliance with standards such as monetary allowances, or tax reduction etc.
4. There should be compensation or opportunities for rent reduction where the housing conditions are a risk to health. This would provide an incentive to owners to ensure compliance with standards.
5. There is a need to identify examples of best practice regarding standards for domestic health and safety and promote the harmonization of those standards throughout Europe.

The detailed project report and the questionnaires used for data collection can be found at: [http://www.euro.who.int/Housing/20070115\\_1](http://www.euro.who.int/Housing/20070115_1)