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ACCIDENTS

Report on a WHO coordination meeting
of experts

Jūrmala, Latvia
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EUR/HFA targets 18, 19, 24

TARGET 18

POLICY ON ENVIRONMENT AND HEALTH

By the year 2000, all Member States should have developed, and be implementing, policies on the environment and health that ensure ecologically sustainable development, effective prevention and control of environmental health risks and equitable access to healthy environments.

TARGET 19

ENVIRONMENTAL HEALTH MANAGEMENT

By the year 2000, there should be effective management systems and resources in all Member States for putting policies on environment and health into practice.

TARGET 24

HUMAN ECOLOGY AND SETTLEMENTS

By the year 2000, cities, towns and rural communities throughout the Region should offer physical and social environments supportive to the health of their inhabitants.

ABSTRACT

The Regional Office is developing a series of brief technical brochures aimed at local authorities, to provide them with accurate and practical information on environment and health issues. One of the topics in the series is accidents, an area of environment and health where local authorities constantly face difficult situations. Pamphlets are to be issued covering local policy for accident prevention, child accidents, accidents and older people, fire safety, water safety, road safety, home safety, playground safety and sport and leisure safety. Since close coordination is needed between the authors of the various documents in order to avoid overlaps and to ensure that most of the important topics are tackled, a meeting was convened to allow discussion among the specialists on the basis of the papers prepared by them. The background documentation for these discussions was a detailed table of contents produced by each author prior to the meeting. The participants also proposed illustrations and case studies, finalized the detailed contents of the pamphlets, and drew up a timetable setting the deadlines for the first draft, the final text and the layout.

Keywords

ENVIRONMENTAL HEALTH
ACCIDENT PREVENTION
MUNICIPAL GOVERNMENTS
EUROPE

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INTRODUCTION

The meeting was opened by Mr Emmanuel Briand, who thanked the Latvian authorities, and in particular the Deputy Director of Public Health, for hosting it. The participants agreed to the provisional agenda and elected Mr Briand Chairperson and Ms Waller Rapporteur.

THE PAMPHLET PROJECT

Mr Briand told the meeting that the WHO Regional Office for Europe (WHO/EURO) is developing a series of briefing pamphlets aimed at three different readerships:

- local decision-makers with non-specific knowledge of environmental health (EH) issues;
- EH professionals;
- the general public through communications officers in local authorities or major companies.

The objective is to produce 100–120 documents on all subjects covered by environment and health. There are 10 main themes:

- water
- air
- housing
- waste
- urban planning
- noise
- accidents
- radiation
- toxicology
- hygiene.

Each pamphlet is 20–24 pages long and structured in two parts. The first part is aimed at non-technical persons and explores historical and geographical issues, health effects, economic aspects and technical issues, ending with two or three key recommendations on action to solve the problem. The second part is more technical, and aimed at specialists. Each pamphlet is written by one of the best experts in the field and reviewed by other experts in the European Region.

To make the pamphlets easy to read, the presentation is clear and simple and they contain a large number of illustrations. The aim is to make them a helpful tool for local authorities when communicating with the media or the public at large.

WHO intends that these pamphlets will be translated into as many languages in use in the European Region as possible. Most of the pamphlets that have already been written have been produced in at least two languages, and the last one (on the disinfection of drinking-water) has been produced in 23 European languages as well as Arabic.

Participants were extremely satisfied to see the efforts undertaken by WHO to express difficult concepts in simple language, with the clear objective of helping local authorities to take concrete measures to improve the situation in relation to accidents and accident prevention.

Ms Susie Waller briefly introduced the series of pamphlets on accidents and gave an overview of the situation in Europe as regards accidents. Participants discussed the structure of the series and agreed that pamphlets should be produced on the following topics (but not necessarily with these titles):

- local policy for accident prevention
- accidents to children
- accidents and older people
- road safety
- fire safety
- playground safety
- home safety
- water safety
- sport and leisure safety.

Two further issues were the need to consider the quality of life as a major factor in the consequences of accidents for both the victims and their carers, and the importance of looking at accidents within the context of poverty (equity).

The authors of the pamphlets had already provided WHO with tables of contents, and some had also provided summaries.

1 LOCAL POLICY AND ACCIDENT PREVENTION (RAY RANSON)

This pamphlet has three main purposes:

- to set out the picture regarding accidents across Europe;
- to introduce all the other pamphlets in the accident series;
- to give practical support to local authorities wishing to develop an accident prevention strategy or policy within their local area.

Mr Ranson ran through the main table of contents (below) that he felt would fulfil these objectives. He acknowledged that there was debate around such issues as the difference between the prevention of accidents and of injuries and the comparative usefulness of mortality and morbidity data. The latter are less easily available, but mortality data are not so useful for planning preventive activities.

- Why a strategy is needed:
 - to get a picture of accidents across Europe
 - to ascertain the cost of accidents
 - to identify a pattern in accidents
 - to distinguish types of accident, e.g. fires, drownings
- Accidents related to specific age groups:
 - children (0-14)
 - young adults and middle-aged people
 - older people
- Accidents in relation to typical settings:
 - home
 - play and leisure environment
 - schools
 - roads

- Accidents in relation to type:
 - water
 - fire
- Taking action to prevent accidents:
 - key effective interventions
 - the multi-agency approach
 - who is responsible for accident prevention?
- Recommended framework for local authority action:
 - education
 - engineering
 - enforcement
 - barriers to intervention

Recommendations

1. Local information on accident patterns and characteristics, including causal factors should be assessed.
2. An accident prevention action plan for the local area with a practical framework for its implementation should be established.

Discussion

The participants asked for the following issues to be addressed in this pamphlet:

- the debate about relevant data collection;
- the problem with shifting budgets from the acute to the prevention areas;
- an emphasis that solutions do not have to be expensive;
- the selection of one approach (e.g. settings, issues, age groups) rather than another;
- the debate about the five concepts – danger, near miss, accident, injury, consequence (see 2 below);
- the need to define age groups clearly in all the pamphlets, e.g. within an older population, 65–74 years = aging population, 75 years and over = elderly; there also must be some flexibility for authors to use other data provided these are clearly explained;
- the political element as well as the practical element, so that the pamphlets can enable decision-makers to make informed choices;
- the lack of available data (e.g. on morbidity) should not inhibit action to tackle any area where preventive action is felt to be useful; the extensive use of case studies and comparative charts is a good way to convince those responsible for such action when relevant statistics are not available;
- the necessary multi-agency approach: everyone has a responsibility and local authorities should lobby to drive the development of policy with all relevant partners, taking particular note of the non-availability of hospital data to local authorities;
- risk culture;
- a table of common statistics in the technical annex for all the authors to use;
- the strategy document should act as a guide to all other documents.

2 CHILD ACCIDENTS (JOHAN LUND)

Accidents are the leading cause of death for children in Europe. The author's comprehensive presentation indicated that a great deal of work had already been done. He introduced five concepts: danger, near miss, accident, injury, consequence, and described a number of case studies where accident mortality rates had been reduced following the setting-up of community projects. The driving forces behind these reductions were systematic preventive work, economic development, and safety or the risk culture.

Other themes included:

- coping with danger (two sided coin);
- how to count the number – registration of accidents by doctors or individuals (good quality statistics are a major problem);
- strategies for dealing with accidents to children (multisectoral approach, regional and/or national);
- the effect of culture on the concept of childhood and the social construction of male characteristics: these are encouraged in some cultures where men are sent to war, which results in greater risk-taking.

Technical annex

A technical annex should include the automatic registration of accidents to children in the local health system (such as that used in Norway) and a description of a method for asking the population about the extent and pattern of accidents to children based on that used in Australia.

In summing up, Dr Lund raised the issue of children's rights to a safe world. He also listed a number of possible overlaps with other pamphlets, which needed to be resolved:

- the five concepts
- methods of local registration
- table of accidental deaths in European countries
- strategies for prevention to be closely coordinated with local policy pamphlet
- preventive means to be coordinated with home, traffic, water, sport/leisure, playground.

Recommendations

1. Get a political decision within your community to fight accidents to children.
2. Get an overview of the problem in your community (registration/interview).
3. Get one person to promote and coordinate the different bodies and organizations to carry out preventive activities.

3 ACCIDENTS AND OLDER PEOPLE (SIRKKA-LIISA KIVELA AND KEIJO KOSKI)

Professor Kivela, Dr Koski and Dr Heikki Luukinen (who was unable to come to the meeting) have comprehensively covered the issue of accidents and the elderly. Professor Kivela discussed the definition of "older person" and specified that this wording should be used in the title of the pamphlet rather than "elderly". She presented a table of contents:

1. Summary
2. Definitions
3. Frequency, time and place of accidents
 - 3.1. Incidence of accidents
 - 3.1.1.1. Incidence according to community studies
 - 3.1.1.2. Incidence according to register studies
 - 3.1.1.3. Mortality statistics.
 - 3.2. Places and times of accidents
 - 3.2.1.1. Falls
 - 3.2.1.2. Traffic accidents
 - 3.2.1.3. Burn accidents
4. Risk factors and causes of accidents
 - 4.1. Falls
 - 4.2. Traffic accidents
 - 4.3. Burn accidents
 - 4.4. poisonings
5. Consequences and outcomes of accidents
 - 5.1. Injuries
 - 5.2. Medical treatment
 - 5.3. Physical disabilities
 - 5.4. Psychosocial consequences
 - 5.5. Long-term institutional care
 - 5.6. Deaths
 - 5.7. Other consequences
 - 5.8. Costs of accidents
6. Prevention of accidents
 - 6.1. Prevention strategies
 - 6.2. Prevention of falls
 - 6.3. Institutions
 - 6.4. Homes
 - 6.5. Prevention of traffic accidents
 - 6.6. Prevention of burns
 - 6.7. Prevention of poisonings
 - 6.8. Effects of preventive programmes
7. Responsibility for prevention
8. Recommendations
9. References
10. Technical annex.

Dr Koski presented studies to reduce injuries from falls in institutions and homes, with comprehensive documentation of the results.

Professor Kivela identified a number of key issues:

- the comparison between accidents to middle-aged and old people and their differing consequences, i.e. older people take longer to heal;
- the cost of accidents should include the cost of home help and long-term care for the older age group;
- greater use should be made of longitudinal data to identify problems;
- problems such as revision of driving licence laws for older people and alternative transport solutions;
- the need to educate people about the effects of the aging process.

Recommendations

1. Educate the population about aging.
2. Lobby to change driving licence laws for older people.
3. Draw up safety check lists for home helps and visitors to the home (providing adequate time is allowed within work schedule).

Participants considered that most of the points raised were relevant and the material was there to make an excellent brochure, although the table of contents could appear a little conservative and should be made more attractive for non-specialists. The overlaps between this pamphlet and those on home, road and fire safety were discussed more fully later in the meeting.

4 HOME SAFETY (HENNING BAY-NIELSON AND BIRTHE FRIMODT-MØLLER)

Dr Bay-Nielson presented a selection of baseline data to identify the range and nature of home accidents and to illustrate the inconsistencies in data collection for accidents. In describing the problem with statistics which concentrated on deaths, Dr Frimodt-Møller drew attention to the fact that there were no international morbidity statistics from which to work. The authors put forward two alternative ways of introducing the issue of accidents in the home (excluding residential settings):

- the most vulnerable populations could be presented and relevant preventive action proposed;
- statistical data could help to identify where accidents occur in the home, which would lead to recommendations on engineering and building design.

The rest of the table of contents was as follows:

- Prioritizing the issues
- Identifying risk groups and risk settings in relation to the most vulnerable: children and the elderly:
 - focus on the pre-school age group
 - consider both the groups aged 65-75 and over 75
- Framework for action:
 - multi-agency approach for intervention with particular emphasis on existing strategies such as healthy cities and safe communities

- Interventions:
 - physical safety measures in the home
 - increase awareness
 - information and education
- Costs:
 - measure the cost in both economic and quality of life terms
 - case studies to illustrate cost-benefit analysis of prevention
- Evaluation:
 - injury monitoring systems
 - process evaluation, outcome or output evaluation.

Recommendations

Still to be defined.

Participants considered that the strategy document should act as a guide to all the other documents. They discussed the use of a table of common statistics in the technical annex which could be used by everyone, and pointed out the risk of overlaps between this pamphlet and several other pamphlets (see details on this debate at the end of the report). There was a preference for an emphasis on aspects of design and building in this pamphlet.

5 ROAD SAFETY (GREGOR BARTL)

Dr Bartl told the meeting that EU statistics had shown that one road death costs 1million ECU. He emphasized that people cause accidents on the road. Even when good mechanical means are available to reduce the risk of accidents, people build them into their calculations. For example, the anti-lock braking system (ABS) in cars has not decreased the incidence of accidents: more cars with ABS have accidents than without. Research indicates that people take more risks if they think there are more safety devices to support them.

The pamphlet will have two main sections: main causes of road accidents, and measures to enhance road safety.

Human factors are a major issue in accidents. People sometimes need to take risks, especially the young. Right across Europe this group, which takes the most risks and has the least experience on the roads, has the most accidents. The second group most at risk consists of older people who are less physically able.

Alcohol and prescribed drugs also figure highly in traffic accidents. Dr Bartl showed a video which provided clear evidence that alcohol affects judgment, even at a level of 0.5%. The video showed reactions (eye movements) driving at night before and after alcohol.

Accident prevention means effective interventions. In Norway, there was an 18% decline in the number of accidents in the first five years of a programme targeting young car drivers. In Austria there have been two good interventions: mobile radar control with a lemon and an apple as rewards, and the long-term "Go cool, go safe" project aimed at young people in schools.

Recommendations

These were not completely formulated but Dr Bartl definitely recommended the introduction of traffic calming measures and lobbying for the reviewing of driving test laws for older people.

Participants were keen that accidents to pedestrians and cyclists should be included. They discussed whether mandatory wearing of cycle helmets should be recommended.

This pamphlet should be clearly linked with the pamphlets on cycling and walking, accidents to children and accidents to older people.

6 PLAYGROUND SAFETY (JEROEN BOS)

Mr Bos said that the contents of this pamphlet would be presented in relation to three age groups: 0–3 years, 5–15 years, 15 years and over. They would include:

- a definition of the subject and its importance to public health
- playground safety in general
- playground safety in the European Region
- preventive measures: laws, standards and guidelines
- preventive measures: information and education, community interventions
- economic implications
- the role of local government
- recommendations.

Mr Bos raised a number of points.

- A new law in the Netherlands laid down that all new equipment must conform to legal standards. However, older equipment is still in use.
- What is WHO's position on safety in playgrounds?
- The amount of data to be used.
- Is legislation important?
- Issues of supervision in different cultures; in some cultures parents think that their children have to feel danger.
- Advice on designing and maintaining equipment.
- The CSI is investigating the cost of injuries in the home, on the roads, etc., including the cost of quality of life lost.
- Data on mechanisms of injury would be useful so as to identify changes that could be made easily.
- The problem of not being able to gain easy access to hospital data.

Participants felt that this approach was excellent. They noted that there was a whole new area of safety considerations since playgrounds had become attached to garages, cafes, restaurants, etc. It was agreed that Mr Bos should focus on existing equipment, and perhaps include some information or guidance on where to find information on newly built equipment. Some participants felt that safe surfaces also needed to be included.

Dr Frimodt-Møller offered information from EHLASS data to support this pamphlet.

7 FIRE SAFETY (JIM SHIELDS)

Professor Shields drew attention to the different focuses of fire safety: the safety of life, protection of property, and protection of the environment. However, he felt that this pamphlet should only focus on the safety of life. An overview of the contents included:

- a brief introduction to the physical and chemical processes associated with the ignition, growth, spread and extinction of fire; this would be simple with diagrams to illustrate relationships and the notion of flashover movement of smoke;
- smoke as the main killer: it is important to realize that people also die in non serious fires;
- long-term health problems related to smoke inhalation, including among fire-fighters;
- the complexity and contradiction of legislation and the need to make it more straightforward; almost all changes have resulted from consumer protection lobbying (there is a problem with data in this connection).

Patterns of fires

- incidence of fire by time of day, the most vulnerable people, types of building
- principal causes of ignition
- casualty rates by building type
- fire prevention: education about fire; training; good housekeeping/management.

Professor Shields reminded the meeting that human behaviour is a critical element – people cause fires. He introduced the concept of the Hazard Clock, which allows for good preparation for dealing with fires; this will be developed in the pamphlet.

Recommendations

1. Fit smoke alarms free
2. Be aware of flammable furniture.
3. Education and publicity should be concerted, coordinated and coherent.
4. Check list for home helps and visitors (providing adequate time is allowed in the work schedule).
5. Look at the problems with people on low incomes, or those from different cultures who do not speak the language.
6. Include a simple guide on how to look around premises in relation to fires and simple measures to be taken.

Participants felt it was important to address a number of additional issues

- bonfires and barbeques
- fires in high rise buildings, and their implications
- how to get the message into people's homes, e.g. in Norway chimney sweeps are used
- a definition of fire safety (this was extremely difficult to define)
- the complexity of a building's design and people's familiarity with it.

8 WATER SAFETY

This pamphlet had proved more complicated than had originally been anticipated. It should address a wide range of issues relating to water, including:

- baths
- ponds
- swimming pools
- lakes
- rivers
- canals
- the sea.

It should deal with children and young people using inflatables, people who ignore warning signs for tides and currents, and the irresponsible use of jet skis, wind surfers/surfboards and motor boats.

It is clear that once again there are a number of overlaps with other pamphlets, particularly those on sport and leisure, the home, and children.

Close work had been done with the Chartered Institute of Environmental Health in the United Kingdom which is drawing up a document on pleasure craft hire and commercial water sport, and with the WHO Rome office which is writing global water safety guidelines.

9 SPORT AND LEISURE

This document is at an early stage. WHO had been advised to contact a Monsieur Delcourt (Seraing, Belgium) or Dr Marianne de Løes (Sweden)

The intention is to address a wide range of sports including running, cycling, swimming, diving, team games (football, cricket, tennis, etc.), weight training, gymnastics, and more sophisticated sports such as skiing. Water sports should be touched on but can be dealt with in more detail and cross referenced with the water pamphlet.

GENERAL ISSUES

Overlaps

It is clear that there is potential for a number of significant overlaps in this series. This was discussed fully and the following major decisions were made.

- There would be a common table of data used (WHO European Region World Health Annual 1995). Any other data used would have clearly identified sources and reasons for their use.
- A paragraph on the debate about the collection of data would be included in the strategy/policy document.
- The debate on the five concepts (danger, near miss, accident, injury, consequence) would be outlined in the strategy/policy pamphlet. The authors of other pamphlets could refer to it if they so wished.
- Definitions of age groups and accidents should be included in the strategy/policy document.

- The safety of cyclists, pedestrians and skaters should be included in the road safety pamphlet.
- The debate about cycle helmets should be briefly summarized in the road safety pamphlet.
- The age-related pamphlets would focus on behaviour and psychological issues and activity.
- The pamphlet on home safety would focus on the physical environment within the home with check lists and technical details, cross-referenced to the pamphlets on child, older people and fire safety. It would include settings, environments, times, household data and environmental prevention. Barbeques and bonfires will also be dealt with here.
- The pamphlet on accidents to older people would focus on the specific incidence and death statistics, including individual and intrinsic risk factors and prevention for people living in their own homes as well as all issues relating to residential settings. As regards road safety, this pamphlet will include pedestrian non-traffic accidents and focus on memory, visual and motor functioning and the musculoskeletal system. It will also contain a recommendation for changing legislation on driving licences for older people.
- The road safety pamphlet should be targeted at local authorities and car drivers. It will include alcohol issues.
- The pamphlet on fire will focus on people at risk rather than on injuries or burns. Where older people are concerned, it will address issues of higher levels of disability and mobility.
- The pamphlet on playground safety will focus on physical aspects and be cross referenced to the pamphlets on child safety for certain key statements. It will include young people up to the age of 18 who use playgrounds to meet, drink, smoke and 'lean'.

Mr Bos offered to write the pamphlet on playground safety in both Dutch and English and Dr Bartl offered to write the pamphlet on road safety in both German and English, if this would be helpful.

The WHO representative insisted that two points were of the utmost importance for the success of this project: respect for the *process* and respect for the *content*.

The process can be summarized as follows:

- first detailed table of contents approved by WHO (already done by seven authors)
- first draft cleared by WHO
- second draft
- review
- third draft
- editing
- layout
- translation.

The contents include:

- introduction
- text
- technical annex
- pictures, graphics, etc.
- references
- authorization to reproduce pictures, texts or tables
- data from east and west Europe.

Participants were informed about the position in relation to funding for the completion of the project.

It was suggested that, since all the participants in this meeting would be attending the conference on accidents in the Netherlands in May 1998, consideration be given to holding a follow-up meeting in conjunction with it in order to discuss the completed first drafts. Funding for this meeting remains to be secured.

The proposed (flexible) timetable was:

1 April 1998	first draft.
1 May 1998	WHO answers completed
1 June 1998	second draft completed
1 August 1998	end of review process
15 October 1998	final document edited
15 November 1998	layout finalized, ready for printing.

Participants agreed that the meeting had been useful in helping them to grasp the philosophy of the project and to understand how to resolve overlaps in the series. The WHO representative thanked them for the work they had already done and the commitment and enthusiasm with which they were approaching the continuing task.

CONCLUSIONS AND RECOMMENDATIONS

1. Participants recognized that the pamphlets on environmental and health issues were relevant tools and a useful mechanism for providing guidance to decision-makers in a wide range of areas and on a large number of subjects. They requested WHO/EURO to look for additional resources in order to speed up the development of new documents.
2. The initial audience for the pamphlets was local decision-makers. New target audiences have, however, emerged such as teachers, nongovernmental organizations, groups of professionals, national governments, health promotion specialists, private companies and occupational health professionals. Participants saw this as a positive development of the project which should not lead to major changes in the concept of the documents.
3. The group agreed to produce the following seven first drafts before 1 April 1998:
 - accident prevention strategies
 - accidents to children
 - accidents to older people
 - accidents in the home
 - accidents at playgrounds
 - fire accidents
 - road accidents.
4. WHO should do everything necessary to get the pamphlets relating to accidents translated and printed in as many languages as possible.
5. WHO should recommend its Member States to press local health systems to make their accident data available to local authorities throughout Europe.

6. WHO should recommend that the fifth and sixth digits of the ICD10E code, Chapter XX, be made obligatory in order to improve the quality of accident prevention.
7. WHO should consider inviting Member States to begin monitoring the effects on their health of people exposed to fire, the consequential costs and the loss of quality of life.

Annex 1

**BRIEFING DOCUMENTS FOR LOCAL AUTHORITIES
ON ENVIRONMENTAL HEALTH ISSUES**

GUIDANCE TO AUTHORS

Introduction

WHO/EURO is preparing a series of briefing pamphlets on environmental health which is designed to aid decision-makers who formulate and implement policy at local government level. The background to the project and a description are outlined in an attached document, and a list of titles is also attached.

The following information is provided to assist authors and people who have been asked to review or edit pamphlets. Authors in particular should follow the format recommended here. Not doing so may mean that their work cannot be used, or will require heavy editing to fit the established layout.

The pamphlets will be read in countries that may differ widely, both geographically and in terms of administrative and technical culture. Therefore, try to keep a European rather than a national perspective, and use case studies from around the Region.

PLEASE BEAR THE FOLLOWING POINTS IN MIND

- A. **The pamphlets are going to be read by people who may have little or no background in the relevant subject area, or who may come from a different professional background. Therefore, it is important that terms and concepts are clearly defined, and that the main text makes no assumptions of previous knowledge. Technical content should be largely confined to the Technical Annex.**
- B. **Each pamphlet in the series is less than 10 000 words long, and is intended to be used for a number of purposes, by people from a range of backgrounds. Do not try to achieve too much. For particularly technical subjects, it may be enough that the reader learns what questions to ask and why, rather than being given complete answers.**
- C. **Try to remember that administrative and physical infrastructures may be at different levels of development in different parts of the Region, and avoid making assumptions based on particular local or national experience.**

**THE TEXT SHOULD BE PROVIDED TO THIS OFFICE ON PC-COMPATIBLE DISK,
WHICH MUST BE SUPPLEMENTED BY A HARD COPY ON PAPER.**

Layout

The design and layout of the pamphlets has already been established. Within this structure there is some room for flexibility, as not all subjects can be treated identically. This flexibility is limited, however, by what can physically be done within the established format. It is also important in presenting a series of documents to follow a similar style and layout for continuity of presentation.

The pamphlets will be divided into three sections: a summary, a main section and a technical annex.

1. Summary

This will appear on the first page. It will outline the subject in a short, punchy style aimed at busy politicians and must contain the main concepts and ideas for action. It will usually be written last.
Length: 900–1000 characters (160–200 words).

2. Main section

This will be written in largely non-technical language and be aimed at the interested lay person. It should concentrate on the role that local government can take to reduce, eliminate or manage the problem under examination, with particular emphasis on the health implications. More detailed advice on this is given below.

Length: 20 000–40 000 characters (3500–7000 words).

3. Technical annex

This is intended for the person who has to take action on the subject. It should contain any information which is technical or not of interest to the average lay person, including detailed advice on what to do and where to go. Any technical references should be indicated here.

Length: 6 000–12 000 characters (1000–2100 words).

Note: the number of characters indicated above includes punctuation and spaces between the words.

Main section

These documents are intended to advise people who may have no technical background in the relevant subject area, so avoid technical language as much as possible in this section. It should include the following.

1. An introduction to define the subject and its importance to public health.
2. Consideration of the subject in more detail which should include a discussion of the issues involved and, where possible, some historical background. Be sure to indicate the sections of the population whose health may be at risk, and under what circumstances.
3. The extent of the problem in different parts of the European Region, highlighted by practical examples.
4. Possible interventions and their likely effectiveness. Any resource requirements, e.g. where intervention involves installing plant or equipment, this will include both capital and operating costs. A detailed breakdown of this, and any other technical advice, should be included in the annex.
5. The economic implications, including perhaps social costs such as health care, loss of productivity and earnings, costs to the quality of life and the attractiveness of an area for future investment. The cost of any interventions should be covered and may be compared with their benefits.
6. The role of local government must be defined in the form of practical, sustainable action that communities can develop. Advice on monitoring and assessment at the local level will often be essential.
7. Case studies to demonstrate the effectiveness of local government actions around the European Region.

8. Where WHO has adopted a position on the subject under study, that position shall be taken up in the text and clearly specified.
9. Recommendations for action should be prioritized on four levels: those basic for a safe and healthy environment; those that should demonstrate visible health gains; those that are linked to improving the quality of life in the community; and those that are not specifically health-related.
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SMITH, A.B. & JONES, C.
SMITH, A.B. et al.

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For a *journal* give the volume, issue and page numbers, and the year of publication, as in this example:

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Annex 2

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