DEVELOPMENT
OF
ENVIRONMENT AND HEALTH INDICATORS
FOR
EUROPEAN UNION COUNTRIES

ECOEHIS

Grant Agreement SPC 2002300
Between the European Commission, DG Sanco
and the World Health Organization, Regional Office for Europe

Executive Summary
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Executive Summary

The Declaration of Fourth Ministerial Conference on Environment and Health in Budapest, June 2004, reaffirmed that the Environment and Health Information System (EHIS) is an essential tool to support policy-making. WHO, EEA and the European Commission were requested to further develop and manage the environment and health indicators, related data sets and the shared information infrastructure to establish a pan-European EHIS. The Declaration also stipulated that the progress be reported to the intergovernmental meeting by the end of 2007.

WHO started technical work to develop methods and tools for EHIS in 1999. The ECOEHIS project was a part of it, co-funded by the EC DG SANCO in the framework of its Health Monitoring Programme in 2002 (SPC 2002300). The project objective was to establish a core set of environmental health indicators for EU countries, focusing on the population’s exposure to environmental hazards, their health effects, and policy actions to prevent the illnesses, injuries and deaths. The scope of the project was derived from the decision of the European Parliament and the Council, covering the topics of housing conditions, home and leisure activities, road accidents, and various aspects of external environment. Eleven Member States nominated national focal points to strengthen partnership for the project implementation. Working Groups of invited experts and national focal points identified indicators relevant for application in EU. Indicators thus selected were validated and tested for feasibility by the national partners of the project. WHO coordinated the work and contributed to its technical contents. The final consultation recommended the set of seventeen indicators on exposure, effects and actions that are ready for implementation in EU countries as a part of the EC Health Indicators (ECHI) set.

The project first evaluated the compatibility of the proposed 48 indicators with existing body of legislation and regulations at EU. These indicators at the outset were adopted from the core indicators identified by previous WHO projects. This step confirmed that 9 indicators would be non-compliant to existing EC legislation. Non-compliant indicators were not considered in the next step of the project, unless they were readily available in the existing international data sources on a voluntary basis. Therefore, most indicators considered in this project would not require new laws or regulations in order to be adopted as part of the EC health monitoring system. A comprehensive report, Verification of Compatibility of WHO EH Indicators with the EC Body of Legislation, was prepared by a consultant, and discussed by the Working Group at the project meeting in Berlin, May 2003.

The indicators on ‘housing and health’, ‘noise and health’, and ‘road accidents’ were recognized by previous WHO project to be in need of further elaboration. Therefore, the indicators on these three topics were developed and validated by the invited experts. For each area, experts held two technical meetings, and identified promising indicators based on their review of existing scientific evidence and approaches to the surveillance. These indicators were then validated and refined in a small-scale studies conducted by the experts before being proposed for pilot testing. For the indicators on other topic areas than the above three areas, core indicators previously developed by WHO’s project were reexamined and updated by consulting experts. At the Working Group meeting in Luxembourg, January 2004, the national focal points and experts discussed the proposed set of indicators, selected 46 indicators to be subject to the pilot study in the participating Member States, and agreed on the protocol of the pilot study and the criteria for evaluating indicators.

The national project teams and network of experts collected information necessary for the implementation of selected indicators in their countries in accordance with the study protocol and a questionnaire. Indicators were graded as poor, fair, or good, for four evaluation criteria: the availability, the quality, the comparability, and the policy-relevance. Participating Member States submitted national reports summarizing their own assessments of readiness for the implementation of the proposed indicators.
At the Working Group meeting in Bonn, July 2004, participating countries reviewed the results of pilot study and reached an agreement on classification of indicators into three categories. Indicators that were both policy-relevant and readily available from existing international data sources with sufficient quality and comparability were recommended to the ECHI short list. When necessary, definition of indicators was adjusted to fit with the existing databases. In the end, the project produced essential guidelines regarding the definition and methodology of recommended indicators, including underlying concepts, specification of data, availability and quality of data sources, computation method and units of measurement, policy and regulatory context, interpretation and limitations, etc.

The following environmental health indicators on exposure, effects, and actions are recommended as the main outcome of the project.

I. Ready and recommended for immediate implementation* (These indicators are recommended as ‘core’ European Community Health Indicators):

**Air quality:**
- Population exposure to air pollutants: particulate matter, ozone, NO₂ and SO₂
- Existence of national policies to reduce environmental tobacco smoke exposure

**Housing and Health:**
- Crowding of the residence
- Dampness and mould growth in the residence
- Housing hygiene
- Crime and perception of crime in the neighborhood
- Deaths associated with extreme temperature

**Noise and Health:**
- Population exposed to various noise levels by different sources
- Existence of national policies to reduce exposure to leisure sounds

**Traffic Accidents:**
- Deaths due to road transport accidents
- Injuries due to road transport accidents

**Water and Sanitation:**
- Population supplied with safe drinking waters

**Chemical Emergencies:**
- Existence of regulatory requirements for land-use planning
- Existence of national registry of chemical incidents
- Government preparedness for chemical incidents

**Radiation:**
- Incidence of malignant melanoma
- Existence of effective environmental monitoring of radioactivity

II. Ready, but not feasible for immediate implementation (These indicators are recommended for WHO project such as ENHIS):

**Air Quality:**
- Years of Expected Life Lost due to air pollution

**Housing and Health:**
- Radon in dwellings
- Housing safety and accidents

* In addition, indicators on upstream determinants i.e. driving forces, pressures and state of the environment, were recommended to the core set when they are readily available and relevant to environmental health policies.
Noise and Health:
• Cardiovascular diseases and deaths due to noise exposure

Traffic Accidents:
• Potential Years of Life Lost due to traffic accidents

Water and Sanitation:
• Management of bathing waters

III. Desirable though requiring further developmental work (These indicators are recommended for further elaboration):

Housing and Health:
• Accessibility of the elderly or disabled people to the residence

Noise and Health:
• Annoyance and sleep disturbance due to noise

Traffic Accidents:
• Person time spent on the road
• Use of vehicle safety device
• Disability Adjusted Life Years (DALY) lost due to road accidents
• Deaths due to drinking driving

Water and Sanitation:
• Existence of water safety plans
• Outbreak of water-borne diseases

The participating Member States reported a very positive impact of collaboration in this project. For example, France reported that the ECOEHIS project activated a synergistic interaction between European countries and national experts for implementation of a harmonized European monitoring system. Italy reported that the technical reports by ECOEHIS project team would promote a regular environment and health reporting linked to European network. In the Netherlands, a steering committee of stakeholders was established for the project ensuring the progress towards the establishment of the national EHIS. Most of participating countries reported similarly positive experiences of capacity building for future adoption of EHIS.

In conclusion, this project developed, evaluated, classified and recommended environmental health indicators that can be readily applicable in most EU countries. These indicators will also serve as the main constitution of the pan-European EHIS as endorsed by the Budapest Declaration of 2004.
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