Project description

Background

Reducing the burden of diseases associated with environmental health risks is a European priority. The Children’s Environmental and Health Action Plan for Europe (CEHAPE), drafted in 2004, set regional goals for European countries to reduce and, where possible, eliminate children’s exposure to environmental health risks. The evaluation of the social and economic costs and benefits of action and inaction was among the main measures encouraged. The priority of protecting children from environmental pollution was also part of the 2010 Parma Declaration (WHO). These documents emphasise the importance of involving young people in decision-making processes; encouraging the creation of participative tools for the development of environment and health indicators; and implementing initiatives on the perception of risk, its assessment, management and communication.

Objectives

The main objective of LIFE GIOCONDA was to provide local authorities with an innovative methodology for supporting policies on environment and health, by involving young people in decision-making processes. The aim was to collect data on air and noise pollution in four cities - Napoli, Taranto, Ravenna and Valdarno – and combine this with data assessing the risk perception of
teenagers, and their willingness-to-pay for local services related to environmental health. The project, developed in four cities (Napoli, Taranto, Ravenna and Valdarno), planned to use its data to develop and test an online platform to facilitate dialogue and exchange of information. The application of environmental and health risk governance and policies based on data, which includes a tool enabling schools to measure pupils’ perception of their surrounding environment and a decision-making tool to estimate costs and benefits of policies which includes a decision-making tool to estimate costs and benefits of policies.

Results

LIFE GIOCONDA provided young citizens and local administrations with an on-line tool (“Gioconda Platform”) for engaging in dialogue on health and environmental issues. Alongside education activities, this enabled young people to be actively involved in environmental and health decision-making. The project also developed and tested the “CBA Gioconda” tool, to evaluate the costs and benefits of interventions planned to improve environment and health conditions.

The project’s participatory process was demonstrated in secondary schools in four areas in Italy with different socio-economic and environmental pressures: Ravenna and Ferrara, small towns with significant industrial and agricultural activities; the Lower Arno Valley (San Miniato), an area with small tanneries and agriculture; Naples, a city with significant waste management, air and noise pollution problems; and Taranto, a town that is home to the largest steel industry in Europe.

The test of the GIOCONDA platform was performed in Ferrara, Montopoli, Bitonto, Calcinaia, Gioia del Colle and Terni.

Around 800 young people (aged 11-17) participated in air quality and noise monitoring, in and outside schools. They learnt how monitoring instruments work, discussed hazards and risks with experts, and compared their risk perception with actual monitoring results. Local administrators listened to the pupils’ recommendations, in what was considered an innovative and very successful example of citizen science. Recommendations were presented at public events, to help decision-makers develop evidence-informed policies for preventing or reducing environmental health risks.

Air pollution increases respiratory infections, and lower respiratory infections (e.g. pneumonia and bronchitis) are a significant cause of mortality in children. The project’s atmospheric fine-particle monitoring, inside and outside of school buildings, showed levels within limits set by Italian legislation; but generally above thresholds for health-harmful pollution levels proposed in WHO air quality guidelines. All schools considered measures to reduce car use.

Noise is a risk factor for mental, behavioural and neurological disorders. For example, children’s language skills, reading comprehension, memory and attention can be affected. According to the EU Noise Directive, schools should be located in quiet areas. The project’s monitoring of noise levels found around 75% of classrooms in the 8 schools were “very poor” or “poor”, mainly due to structural problems in the school buildings. Two schools had planned interventions to reduce noise by the end of the project. The children’s perception
of air quality risk was consistent with monitored levels of pollution, being higher in schools close to busy streets, city centres and industrial areas. However, a significant gap between risk perception and noise monitoring was observed.

The project’s focus on air and noise pollution helps implement a range of international (e.g. Parma Declaration) and EU policy (e.g. Clean Air Policy Package, Noise Directive, and Youth Strategy). The CBA Gioconda tool enables policy makers to conduct cost-benefit analysis for proposed policy options.

As a result of the participatory process, practical actions were proposed to administrators, such as improvements in local public transport and bike lanes linking city centres to the outskirts. In Ravenna and Ferrara, pupils’ recommendations were formally included in Urban Mobility Plans. GIOCONDA was also included in the training plans of the four municipalities of the Lower Valdarno (San Miniato, Castelfranco, Montopoli, Santa Croce) and Calcinaia (Pisa), and the Regional plan for Environmental Education of the Emilia-Romagna Region. Administrators in all project cities were interested in organising ‘city councils of school children’ to receive new ideas and proposals through the use of the Gioconda Platform.

The Gioconda Platform, which includes a database covering all Italy, can be easily replicated and transferred, or adapted to other public health and environmental issues. In Calcinaia, for example, a school is using the platform to involve students in the planning of public gardens and cycling paths. Information about the platform is available on the LIFE GIOCONDA website.

Environmental and social benefits are mostly expected in the medium- to long-term, but could be considerable. Direct benefits for schools can derive from improved information and awareness, and targeted interventions to reduce noise and air pollution. A key output from the CBA tool is the estimation of the monetary benefits of improving children’s health. This includes obtaining values for children’s and parents’ willingness to pay (WTP) to reduce children’s risk of an asthma attack (e.g. child age was found to be inversely related to WTP).

Further information on the project can be found in the project's layman report (see "Read more" section).
public health, decision making support, urban area, air pollution, local authority, social participation, information service

Target EU Legislation

- Noise
  - Directive 2002/49 - Assessment and management of environmental noise (Noise Directive) (25.06.200 ...)
- Air
  - Directive 2008/50/EC - Ambient air quality and cleaner air for Europe (21.05.2008)

Natura 2000 sites

Not applicable

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Beneficiaries:

Coordinator Institute of Clinical Physiology, National Research Council
Type of organisation Research institution
Description The Institute of Clinical Physiology of the Italian National Research Council (IFC-CNR) is one of the leading institutes in the biomedical sector. The IFC-CNR epidemiology department, 70 researchers and technicians, has an Environmental Epidemiology Research Unit (EERU), involved in studying the health effects of environmental stressors in various contexts. Part of this work relates to health impact assessment (HIA), risk perception and risk communication. Those activities address the interfaces between science and decision making, governance mechanisms, public participation, awareness raising and empowerment activities.

Partners Comune di Ravenna, Italy Regional Environmental Agency Puglia Region, Italy Società della Salute Valdarno Inferiore, Italy Regional Environmental Agency 'Emilia Romagna', Italy Suor Orsola Benincasa University, Italy
Administrative data:

- Project reference: LIFE13 ENV/IT/000225
- Duration: 02-JUN-2014 to 30-NOV-2016
- Total budget: 1,391,641.00 €
- EU contribution: 687,612.00 €
- Project location: Emilia-Romagna (Italia) Toscana (Italia) Campania (Italia) Puglia (Italia)

Read more:

- Brochure: Title: "Gioconda: i GIOVANI CONTANO NELLE DECISIONI su AMBIENTE e SALUTE" (1.42 MB) Editor: LIFE Gioconda No of pages: 10
- Project web site: Project's website
- Project web site - 2: Project's Facebook page
- Project web site - 2: Project's Twitter page
- Publication: After-LIFE Communication Plan: Title: After-LIFE Communication Plan Year: 2016 Editor: LIFE Gioconda No of pages: 17
- Publication: Layman report: Title: Layman report - Part2 (Italian and English version) Editor: LIFE Gioconda No of pages: 21
- Publication: Layman report: Title: Layman report (Italian/English version) Editor: LIFE Gioconda No of pages: 11
- Publication: Technical report: Title: Project's Final technical report Year: 2017 Editor: Istituto di Fisiologia Clinica, Consiglio Nazional No of pages: 89