

A photograph of a modern building with a glass facade, featuring a prominent triangular architectural element. The image is used as a background for the text.

Environment and Health: Needs in public health and prevention policy

Liliana La Sala, MD
Environmental Health Office Director
Ministry of Health
General Direction for Health Prevention
l.lasala@sanita.it

Ministry of Health Italy

Activities in Health and Environment

- Synergy with international trends (EU, UN, WHO, OCSE etc.)
- Prevention National Plan (coordination and monitoring 21 Regions public health activities)



EUROPEAN UNION

VII Action Programme for Environment

"LIVE WELL WITHIN OUR PLANET"

A framework for european policy

December 2013

9 PRIORITY GOALS

N°3 To protect citizens against envirommental risks to preserve health and well being;



WHO Europe Health 2020: A European Policy Framework supporting action across government and society for health and well-being

**Collaboration between environmental and
health sectors is critical.**

Health and well being depend strictly on:

- how one is born
- grows up
- works
- grow old



WHO Europe EEHP

Vth Interministerial Conference

Parma March 2010

Mid Term Conference

Haifa April 2015

Toward VIth Interministerial
Conference



WHO Europe



Fifth Ministerial Conference
on Environment and Health

*Protecting children's health
in a changing environment*

Parma, Italy, 10-12 March 2010



Regional Priority Goal 1

Ensuring public health by improving access to safe water and sanitation



Regional Priority Goal 2

Addressing obesity and injuries through safe environments, physical activity and healthy diet



Regional Priority Goal 3

Preventing disease through improved outdoor and indoor air quality

Regional Priority Goal 4

Preventing disease arising from chemical, biological and physical environments



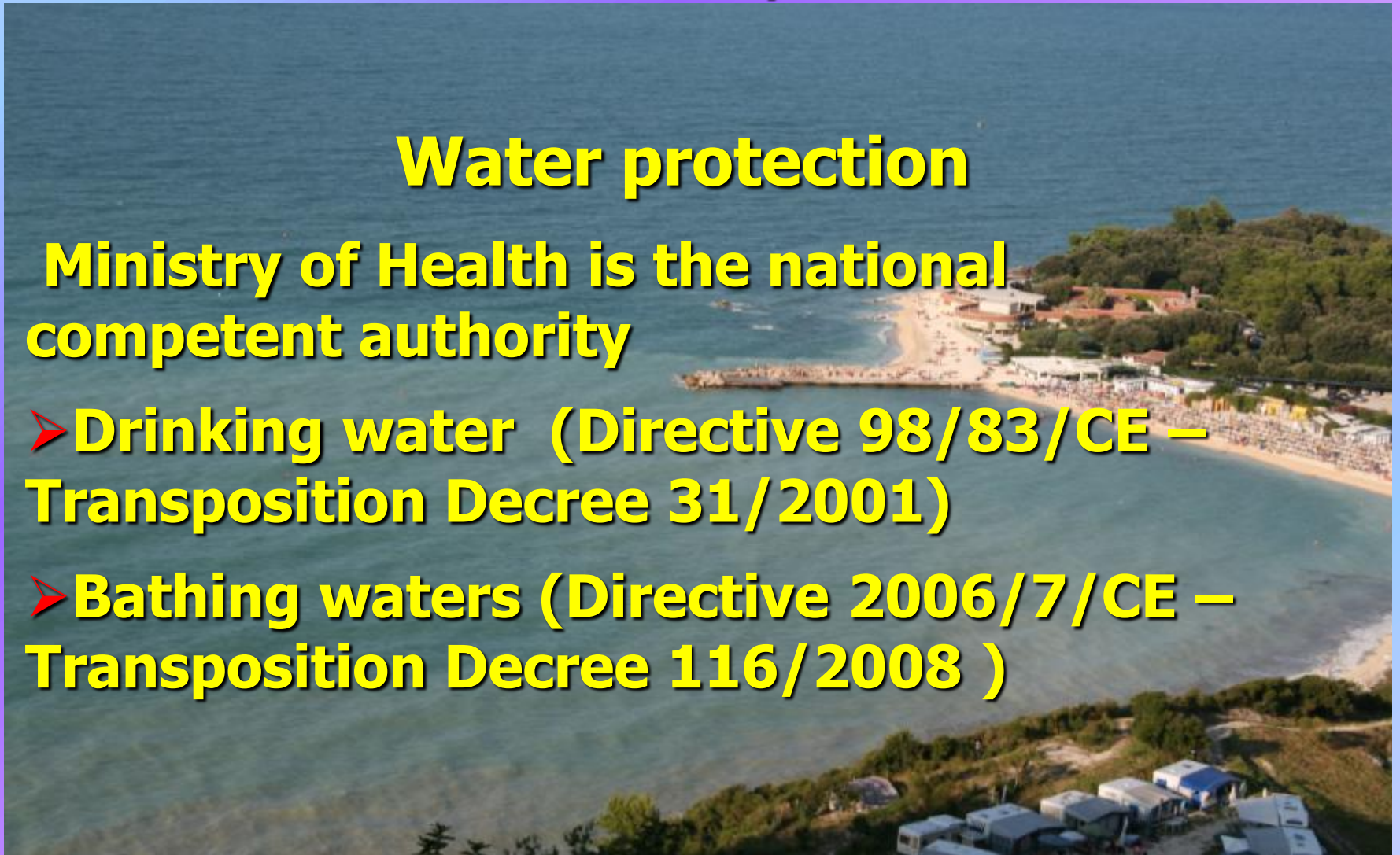
NATIONAL ENVIRONMENTAL LEGISLATION

Decree 152/2006

Water protection

Ministry of Health is the national competent authority

- Drinking water (Directive 98/83/CE – Transposition Decree 31/2001)**
- Bathing waters (Directive 2006/7/CE – Transposition Decree 116/2008)**



NATIONAL ENVIRONMENTAL LEGISLATION

Decree 152/2006

The background image shows a wide view of a coastal city. In the foreground, there is a large body of water, likely a harbor or bay, filled with numerous small boats and larger vessels. The middle ground features a dense urban area with various buildings, including some with arched roofs. In the background, several tall industrial smokestacks are visible, with thick plumes of white smoke rising into the sky. The overall scene suggests a focus on environmental issues related to industrial emissions and urban development.

Air Quality and Emissions control

➤ **Directive 2008/50/CE –
Transposition Decree 155/2010**

NATIONAL ENVIRONMENTAL LEGISLATION

Decree 152/2006

Waste and polluted sites.

**Ministry of Health: support ,even in
emergency**



REACH

Registration, Evaluation Authorization of chemical substances (REG 1907/2006/CE)

- L. 46/2006 National Competent Authority .
Ministry of Health
- Activity Plan DM 2007
- State-Regions agreement 2009 october
29th → monitoring activities
- Decree on sanctions 133/2009

PREVENTION NATIONAL PLAN (PNP) 2014-2018



- 10 Goals with one specific committing Regions to act to reduce environmental expositions to pollutants and to promote primary and secondary prevention
- Attention to children
- Attention to fragile people



PREVENTION NATIONAL PLAN (PNP) 2014-2018



➤ Central role of Prevention Departments of Local Health Agency (ASL)



IO REGIONALE
A
ocale della Romagna



Azienda
Unità
Sanitaria
Locale
ROMA



A.S.L. TO1

Azienda Sanitaria Locale
Torino



to integrate actions between health (ASL) and environmental sectors (Arpa) and to support political authorities choices



Ministero della Salute

**Piano Nazionale
della Prevenzione**

2014-2018

- [illegible]

-  Ministero della Salute



Prevention of Chronic Diseases

**very limited budget
by health systems.**

Health Budgets for Prevention

OCSE: only 3%

ITALY: only 1%

Most spent for care services, diagnosis and therapy of chronic diseases.

Necessity to evaluate policies impacts (HIA)

The Global Burden of Chronic Diseases Overcoming Impediments to Prevention and Control

Derek Yach, MDCall, MPH
Carima Hawkes, PhD
C. Lynn Gould, MS, MPH
Karen J. Hofman, MD

CHRONIC DISEASES ARE THE largest cause of death in the world (FIGURE 1), led by cardiovascular disease (17 million deaths in 2002, mainly from ischemic heart disease and stroke) and followed by cancer (7 million deaths), chronic lung diseases (4 million), diabetes mellitus (almost 1 million).¹ These leading diseases share key risk factors: tobacco use, unhealthy diets, lack of physical activity, and alcohol use (TABLE).² The current burden of chronic diseases reflects past exposure to these risk factors, and the future burden will be largely determined by current exposures.

The global prevalence of all the leading chronic diseases is increasing, with the majority occurring in developing countries and projected to increase substantially over the next 2 decades (FIGURE 1).² Cardiovascular disease is already the leading cause of mortality in developing countries (FIGURE 2).¹ Between 1990 and 2020, mortality from ischemic heart disease in developing countries is expected to increase by 120% for men and 137% for women.³ Predictions for the next 2 decades include a near tripling of ischemic heart disease and stroke mortality in Latin America, the Middle East, and sub-Saharan Africa. The global number of individuals with diabetes in 2000 was estimated to be 171 million (2.8% of the world's population); diabetes in 2030 was projected to increase to 298 million of whom

Chronic diseases are the largest cause of death in the world. In 2002, the leading chronic diseases—cardiovascular disease, cancer, chronic respiratory disease, and diabetes—caused 29 million deaths worldwide. Despite growing evidence of epidemiological and economic impact, the global response to the problem remains inadequate. Stakeholders include governments, the World Health Organization and other United Nations bodies, academics, the World Health Organization and other United Nations bodies, academic and research groups, nongovernmental organizations, and the private sector. Lack of financial support retards capacity development for prevention, treatment, and research in most developing countries. Reasons for this include that up-to-date evidence related to the nature of the burden of chronic diseases is not in the hands of decision makers and strong beliefs persist that chronic diseases afflict only the affluent and the elderly, that they arise solely from freely acquired risks, and that their control is ineffective and too expensive and should wait until infectious diseases are addressed. The influence of global economic factors on chronic disease risks impedes progress as does the orientation of health systems toward acute care. We identify 3 policy levers to address these impediments: elevating chronic diseases on the health agenda of key policymakers, providing them with better evidence about risk factor control, and persuading them of the need for health systems change. A more concerted, strategic, and multisectoral policy approach, underpinned by solid research, is essential to help reverse the negative trends in the global incidence of chronic disease.

JAMA. 2004;291:2676-2677

will live in developing countries.⁴ Cancer incidence increased 19% between 1990 and 2000, mainly in developing countries.⁵ Death and disability due to chronic obstructive pulmonary disease are increasing across most regions.⁶ Risks for chronic disease and obesity levels among adolescents in developing countries have risen over the past decade and portend rapid increases in chronic diseases.^{7,8}

Numerous developing countries and countries in transition have witnessed a rapid deterioration of their chronic disease risk and mortality profiles.⁹ In

the world's most populous country, China, age-specific death rates from cardiovascular disease increased between 2000 and 2004 in those aged 45 through 54 years between 1999, and by more than 100% in the same period, cancer death rates in-

Author Affiliations: Dr. Yach is from the Center for Communications Programs, Harvard School of Public Health, Boston, Mass. Dr. Hawkes is from the Center for Communications Programs, Harvard School of Public Health, Boston, Mass. Dr. Gould is from the Center for Communications Programs, Harvard School of Public Health, Boston, Mass. Dr. Hofman is from the Center for Communications Programs, Harvard School of Public Health, Boston, Mass.

©2004 American Medical Association

HEALTH IMPACT ASSESSMENT (HIA)

**UE and WHO integrated approach:
to improve knowledge to help implementing
of health policies in different public policies
(transports, agriculture, industry etc.)**



Research in public health NATIONAL CENTRE FOR DISEASES PREVENTION AND CONTROL (CCM)

**Provides coordination between Ministry of
Health and Regions for prevention activities
in NHS through specific projects**

**Environmental Health: projects by Regions
and institutional research partners (ISS,
Universities ecc..)**

Italy: examples of public health intervention linked to CCM projects



“SENTIERI PROJECT”.

Wide national epidemiologic project on CONTAMINATED SITES, conducted by National Institute of Health on behalf of Ministry of Health

“map” of health impact of contaminated sites
across italian territory, allowing to:

- Set priorities for land draining
- Set prevention actions to populations living near contaminated sites



Paradigmatic have become

Taranto ILVA
Campania "Terra dei fuochi"

Law n.6/2014



25 M euro 2014-2015

Puglia and Campania Regions
to set up prevention programmes for populations
living near contaminated sites



Rivista dell'Associazione italiana di epidemiologia ANNO 33 (4-5) NOVEMBRE-DICEMBRE 2003 SUPPLEMENTO X

Rivista dell'Associazione italiana di epidemiologia ANNO 33 (4-5) NOVEMBRE-DICEMBRE 2009 SUPPLEMENTO X

A cura di

Giovanna Berti,
Claudia Galassi,
Annunziata Faustini,
Francesco Forastiere

Air pollution and health

epidemiological surveillance and prevention





• Cities involved in EPIAIR and EPIAIR2 (2001-2010)

CCM VIIAS project air pollution impact on health and environment

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812

MARCH 5, 2015

VOL. 372 NO. 10

Association of Improved Air Quality with Lung Development in Children

W. James Gauderman, Ph.D., Robert Urman, M.S., Edward Avol, M.S., Kiros Berhane, Ph.D., Rob McConnell, M.D., Edward Rappaport, M.S., Roger Chang, Ph.D., Fred Lurmann, M.S., and Frank Gilliland, M.D., Ph.D.

BACKGROUND

Air-pollution levels have been trending downward progressively over the past several decades in southern California, as a result of the implementation of air quality-control policies. We assessed whether long-term changes in pollution were associated with improvements in respiratory health among children.

METHODS

As part of the Children's Health Study, we measured lung function annually in 2120 children from three separate cohorts corresponding to three separate calendar periods: 1994-1998, 1999-2003, and 2007-2011. Mean ages of the children within each cohort were 11 years at the beginning of the period and 15 years at the end. Linear regression models were used to evaluate the relationship between declining pollution levels over time and lung-function development from 11 to 15 years of age, measured as the increases in forced expiratory volume in 1 second (FEV₁) and forced vital capacity (FVC) during that period (referred to as 4-year growth in FEV₁ and FVC).

RESULTS

Over the 13 years spanned by the three cohorts, improvements in 4-year growth of both FEV₁ and FVC were associated with declining levels of nitrogen dioxide (P<0.001 for FEV₁ and FVC) and of particulate matter with an aerodynamic diameter of less than 2.5 μ m (P=0.006 for FEV₁ and P<0.001 for FVC) and less than 10 μ m (P<0.001 for FEV₁ and FVC). These associations persisted after adjustment for several potential confounders. Significant improvements in lung-function development were observed in both boys and girls and in children with asthma and children without asthma. The proportions of children with clinically low FEV₁ (defined as <80% of the predicted value) at 15 years of age declined significantly, from 7.9% to 6.3% to 3.6% across the three periods, as the air quality improved (P=0.001).

CONCLUSIONS

We found that long-term improvements in air quality were associated with statistically and clinically significant positive effects on lung-function growth in children. (Funded by the Health Effects Institute and others.)

From the Department of Preventive Medicine, University of Southern California, Los Angeles (W.J.G., R.U., E.A., K.B., E.R., R.C., F.G.) and Sonoma Technologies, Petaluma (F.L.) — both in California. Address reprint requests to Dr. Gauderman at the Department of Preventive Medicine, University of Southern California, 2001 Soto St., 202-K, Los Angeles, CA 90032, or at jimg@usc.edu.

N Engl J Med 2015;372:905-13.
DOI: 10.1056/NEJMoa1414123
Copyright © 2015 Massachusetts Medical Society.

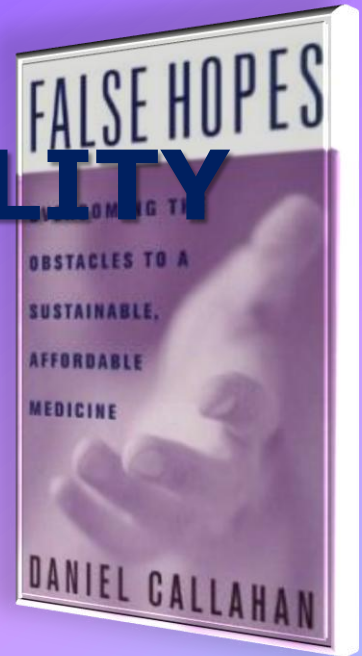
PUBLIC HEALTH and PERSONAL RESPONSIBILITY



Risk reduction is the first duty of Public Health.

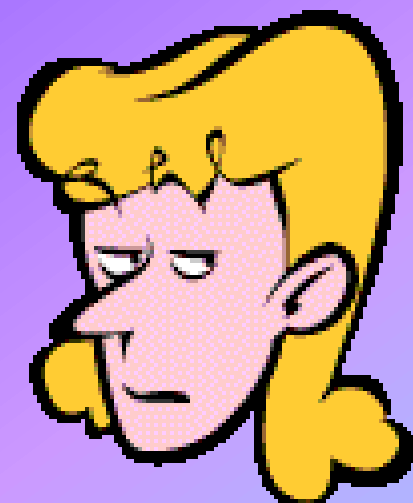
Nevertheless Public Health can give a relevant contribution to focus attention on risks for individual health of hazardous behaviour.

If we want to guarantee a sustainable medicine, we must match public health intervention and promotion of individual healthy life styles.





**THANK YOU FOR
ATTENTION**



l.lasala@sanita.it

