SCIENCE OF THE TOTAL ENVIRONMENT

An International Journal for Scientific Research into the Environment and its Relationship with Humankind

AUTHOR INFORMATION PACK

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DESCRIPTION

Science of the Total Environment is an international multi-disciplinary journal for publication of original research on the **total environment**, which includes the **atmosphere**, **hydrosphere**, **biosphere**, **lithosphere**, and **anthroposphere**.

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AUDIENCE

Environmental Scientists, Environmental Toxicologists, Ecologists, Chemical/Environmental Engineers, Environmental Health Scientists and Epidemiologists, Risk Scientists, Environmental Science Managers and Administrators.

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Water and wastewater treatment and reuse technologies; Alternative water resources; Water management and impact assessment; Solid waste management; Specific green technologies; Water – waste – energy nexus; Greenhouse gas emission control and minimisation
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Organic pollutants (persistent organic pollutants and environmental molecular markers); Environmental model (process and impact); Human exposure and health risk.
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Contaminants of emerging concern; Non-target analysis; High resolution Mass Spectrometry; Microplastics; Biomonitoring
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Water treatment; Wastewater treatments; Reuse of reclaimed water; Occurrence and removal of pharmaceuticals from (waste)water; Hospital effluent management and treatment; Petrochemical wastewater treatment; Environmental risk assessment
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Tracing pollutants from their source to foods; Food Integrity, including the evaluation of bioactive compounds in foods; Studying links between food production and environmental pollution
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soil contamination; Sorption/desorption of organic contaminants; Bioaccumulation and transformation of organic contaminants in the terrestrial environment; Applications of synchrotron-based spectroscopy techniques in environmental chemistry, NOM analysis and effects on contaminant behaviors

Editorial Board

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Biomonitoring; Moss biomonitoring; Raptor biomonitoring; Algae biomonitoring; PAHs contamination; Heavy metal contamination; Cellular localization of metals; Hydrological fluxes of forest canopies
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Environmental implication and applications of nanomaterials; Sediment and water remediation; Contaminant (metals and organics) transformations in the environment; Reuse of materials in environmental applications
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Pharmaceuticals and personal care products; Hospital effluent; Water environment; Sewage treatment plant; Occurrence and environmental fate; Water treatment system; Water management; Environmental science; Environmental hygiene; Public health
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environmental biogeochemistry, active and passive biomonitoring of persistent contaminants in terrestrial and aquatic ecosystems
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Expertise in Waste management; Environmental monitoring and Risk assessment; Life cycle analysis; Soil and Groundwater decontamination; Geochemical/Thermodynamic modelling; Environmental economics
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Expertise in sustainable development, particularly in the following areas: environmental services, ecology and biogeochemistry of ecosystems and agroecosystems; Bioenergy; Biofuels; Biochar; Remote sensing; Electron microscopy; Applied to nanotechnology, electronics and automation; Climate change adaptation; Mitigation of greenhouse gases emissions
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Biogeochemical cycling of mercury and trace elements; Biogeochemistry of peatlands
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Environmental pollution; Water and soil contamination; Biomonitoring; Toxic metal(loid)s; Ecotoxicology; Bioremediation; Environmental microbiology; Ecological engineering; Ecotechnology; Nanobiotechnology; Wastewater treatment
Paul Bradley, U.S. Geological Survey (USGS), Columbia, South Carolina, USA

Drinking Water Exposure; Water Quality; Environmental and Public Health; Contaminants of emerging concern; Pharmaceuticals; Water Reuse; Remediation; Environmental microbiology; Urban and Aquatic Ecology

Satinder Brar Kaur, Institut National de la Recherche Scientifique (INRS), Québec, Quebec, Canada

Wastewater; Wastewater sludge; Treatment; Emerging contaminants; Antibiotics; Fermentation; Value-added bioproducts, such as enzymes, organic acids, platform chemicals, biocontrol agents, biopesticides, butanol and biohydrogen

Birgit Braune, Environment and Climate Change Canada, Ottawa, Ontario, Canada

Arctic, marine ecosystems, birds, metals, organo-compounds, biomonitoring, biological effects.

Bryan W. Brooks, Baylor University, Waco, Texas, USA

Water Quality, Environmental and Aquatic Eco- Toxicology, Risk and Hazard Assessment, Comparative Pharmacology and Toxicology, Environmental Public Health, Harmful Algal Blooms, Green and Sustainable Chemistry, Urban and Aquatic Ecology, Water Reuse.

Giorgio Buonanno, Università degli Studi di Cassino e del Lazio Meridionale, Cassino (FR), Italy

10.020: Air pollution; 10.030: Air quality; 10.040: Indoor air pollution; 70.040: Clean technologies; 80.050: Incineration

Joanna Burger, Rutgers University, Piscataway, New Jersey, USA

Eco-toxicology; Behaviour; Monitoring and assessment; Birds and reptiles

Glòria Caminal Saperas, Consejo Superior de Investigaciones Científicas (CSIC), Barcelona, Spain

Biochemical engineering; Environmental engineering (focused on biodegradation of pollutants by microorganisms or enzymes); Bioreactors; Immobilization; Kinetics

Art Chappelka, Auburn University, Auburn, Alabama, USA

Air pollution and global climate effects to terrestrial ecosystems; Native plant community responses (shifts in diversity) to air pollutants and global climate change; Plant-stress-air pollution/global climate change interactions; Urban ecology and ecosystem services

Da Chen, Jinan University, Gangzhou, China

Environmental chemistry; Analytical chemistry; Ecotoxicology; Persistent organic pollutants; Flame retardants; Pesticides; Mass spectrometry; Gas/liquid chormatography.

Wei Chen, Nankai University, Jinnan District, Tianjin, China

Nanoparticles; Nanomaterials; Adsorption; Reactivity; Transport; Remediation; Groundwater; Soil; Organic contaminants

Joaquín Cochero, Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Buenos Aires, Argentina

Biofilm; Stream ecology; Biomonitoring; Urban streams; Citizen science

Xinyi (Lizzy) Cui, Nanjing University, Nanjing, China

Organics; Bioavailability

Rui da Silva Coutinho, Universidade Dos Açores, Ponta Delgada, Portugal

Hydrogeology, Volcanology, Natural Hazards, Water Resources Management, Environmental Geology.

Guido Del Moro, National Research Council of Italy (CNR), Bari, Italy

novel processes for wastewater treatment, aerobic granular biomass technologies, integration of chemical oxidation and biological processes for industrial wastewater, advanced oxidation processes, electro-degradation processes, wastewater treatment modelling

José L. Domingo, Universitat Rovira i Virgili, Reus, Catalonia, Spain

Environmental health; Risk assessment; Persistent organic pollutants; Metals; Food contaminants; Toxicology

Zhaozhong Feng, Chinese Academy of Sciences (CAS), Beijing, China

Air pollutant; BVOCs; Crop growth; Forest health; N deposition; N use and allocation; Ozone pollution; Photosynthesis and C cycle; Water use efficiency; Urban environment and forestry

Jose Angel Fernández, Universidade de Santiago de Compostela, Santiago de Compostela, Spain

Air pollution;Air quality; Water pollution; Rivers; Ecological effects; Bioavailability; Bioindicators; Aquatic toxicology; Heavy metals; Biomagnification; Bioaccumulation; Surveys; Moss; Biomonitoring; Western Europe

Bo Gao, China Inst. of Water Resources and Hydropower (IWHR), Beijing, China

Geochemistry of trace metals in environment; Water and sediment transport; Large-scale watershed management

Jorge Gardea-Torresdey, University of Texas at El Paso, El Paso, Texas, USA

Applications of spectroscopy techniques in environmental chemistry; Phytoremediation; Novel methods for the bioproduction of nanoparticles; Development of analytical methods to detect nanomaterials; Study of the fate of nanoparticles in the environment; Applications of nanotechnology to clean water

Leobardo Manuel Gómez Oliván, Universidad Autónoma del Estado de México, Toluca, Mexico

Aquatic toxicology; Fish toxicity; Emerging contaminants; Metals; Genotoxicity; Citotoxicity; Embryotoxicity; Teratogenesis; Oxidative stress; Biomarkers

Daren Gooddy, British Geological Survey, Oxfordshire, England, UK

Groundwater; Biogeochemical cycles; Residence time indicators

Andrew Gray, University of California, Riverside, Riverside, California, USA

Sediment transport; Hydrology; Water quality; Plastic pollution; Watershed sediment dynamics; Sedimentology; Paleoenvironmental analysis

John Gulliver, University of Leicester, Leicester, England, UK

Noise and air pollution exposure assessment; Air pollution monitoring; Dispersion modelling; Land use regression modelling; Geographical information systems; Geo-statistical techniques (Kriging etc.); Spatial analysis of environmental and health data; Geographical studies of environment and health; Health risk assessments

Ying Guo, New York State Department of Health (NYSDOH), Albany, New York, USA

My research interests: (1) biomonitoring organic chemicals in human body, such as phthalates, PAHs, organophosphate pesticide and environmental phenols; (2) monitoring organic pollutants in environment, e.g., persistent organic pollutants; (3) Analytical method development for novel organic contaminants in various environmental matrix. Recently, I am working on Exposome to women with fertility problems.

Gary Hardiman, Queens University of Belfast, Belfast, UK

Computational biology; Epigenetics; Endocrine disruption; Systems biology; Biomarkers of exposure and human health risk assessment; Diagnostic tool development

Neil S. Harris, University of Alberta, Edmonton, Alberta, Canada

Expertise: cadmium, micronutrients, membrane transporters, trace metal uptake and translocation in plants

Gerard Hoek, Universiteit Utrecht, Utrecht, Netherlands

Exposure assessment; Air pollution modelling; Environmental epidemiology

Peter Hooda, Kingston University, Kingston upon Thames, England, UK

Biogeochemical Cycling of Nutrients and Environmental Contaminants; Catchment Water Quality; Land Degradation; Climate Change Impacts on Soil Processes; Emerging Contaminants

Kiril Hristovski, Arizona State University, Mesa, Arizona, USA

Nanomaterials; Water/Wastewater Quality and Treatment; Solid and Hazardous Waste; Developing Countries

Hafiz M. N. Iqbal, Instituto Tecnológico y de Estudios Superiores de Monterrey, Monterrey NL Mexico, Mexico

Environmental Engineering; Bioengineering; Biomedical Engineering; Bioremediation; Emerging contaminants; Wastewater treatment; Biomaterials; Bio-catalysis; Enzymes; Enzyme-based pollutant degradation; Immobilization; Toxic heavy elements; Liquid and solid waste management; Valorization of agro-industrial wastes and by-products

Rong Ji, Nanjing University, Nanjing, China

Organics; Terrestrial; Biodegradation; Environmental process; Radiotracer

Sunny Jiang, University of California, Irvine, California, USA

Pathogens; Water treatment; Membrane fouling; Microbial water quality; Risk assessments; Water reuse, Virus, bacteria

Weiying Jiang, California Environmental Protection Agency, Sacramento, California, USA

Organics; Pesticides; Dust; Analytics

Wei Jiang, Shandong University, Qingdao, China

Environmental risk of nanomaterials; Nano-bio interaction; Cell membrane damage; Cytotoxicity; Nanoparticle transport

Begoña Jiménez, Consejo Superior de Investigaciones Científicas (CSIC), Madrid, Spain

Persistent Organic Pollutants (POPs); Dioxins; PCBs; Fate of POPs; Contaminants of emerging concern; Organic pollutants in aquatic and terrestrial ecosystems; Bioindicators; Marine mammals; Air Pollution; Environmental chemistry; Monitoring

Sarah Jovan, Pacific Northwest Forest Inventory and Analysis (PNW-FIA), Portland, Oregon, USA

My greatest expertise is in using lichen community composition for monitoring and quantifying nitrogen pollutants. But I also work with lichen/moss tissue assays (for N, S, metals, PAHs), landscape-scale community-based gradient modeling more generally, and biomass modeling for ground-dwelling non-vascular communities in boreal and tundra systems.

Anna Jurado, Technische Universität Dresden, Dresden, Germany

Aquifer recharge quantification; Emerging organic contaminants; Greenhouse gases; Groundwater quality; Groundwater management; Urban groundwater; River-groundwater interaction; Managed aquifer recharge; Numerical modelling; Quantitative hydrogeology

Athanasios Katsogiannis, European Commission, Ispra (VA), Italy

Development and optimisation of analytical chemistry techniques and sampling methodologies to the source understanding; Occurrence and fate of organic contaminants in all environmental compartments, including indoor air, atmospheric air, soil, water and/or wastewater

Nerantzis Kazakis, Aristotle University of Thessaloniki, Thessaloniki, Greece

Groundwater modelling; Groundwater vulnerability; Hydrogeochemistry; Hydrogeophysics; Isotope hydrology; Water resources management; Floods; Climate change impacts on water resources; Managed Aquifer Recharge

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Soil-plant-water relations; Drought stress; Elevated carbon dioxide; Uptake of heavy metals by plants

Charles Knapp, University of Strathclyde, Glasgow, Scotland, UK

Microbial ecology; Bacteria; Microorganisms; Wastewater; Surface water; Nutrients; Eutrophication; Antibiotic resistance; Antimicrobial resistance; Molecular ecology

Dana Kolpin, U.S. Geological Survey (USGS), Iowa City, Iowa, USA

Endocrine disruptors; Pharmaceutical residues; Non-point; Pollution transport; Chemical transport

Prashant Kumar, University of Surrey, Surrey, England, UK

Air quality and health; Airborne ultrafine and nanoparticles; Exposure assessment; Low-cost pollution sensing; Exhaust and non-exhaust emissions; Air pollution control; Grey-grey infrastructure interactions; Indoor air quality; Dispersion modelling; Urban nexus; Future cities/megacities

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Subsurface geochemistry and mitigation technologies of contaminants of emerging concern (CECs)

James Lam, The Education University of Hong Kong, Tai Po, New Territories, Hong Kong

POPs; Emerging contaminants; Risk assessment

Dimitra Lambropoulou, Aristotle University of Thessaloniki, Thessaloniki, Greece

Emerging Contaminants, Organic Pollutants, Transformation Products, Environmental fate, Sample preparation and analysis, Advanced mass spectrometry techniques, Environmental monitoring and risk assessment, water quality, Treatment processes for water and wastewaters

Juying Li, Shenzhen University, Shenzhen, Guangdong, China

Organics; Bioavailability; Isotopes; Analysis; Degradation; Soil-plant system; Transformation; Toxicity

Shibin Li, Syngenta Crop Protection, Greensboro, North Carolina, USA

Environmental toxicology; Regulatory toxicology; Ecotoxicology; Exposure science; Risk assessment; Product safety

Daohui Lin, Zhejiang University, Hangzhou, China

Nanomaterials; Ecotoxicity; Nanotoxicity; Bioavailability; Colloidal behavior; Sorption

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Organic contaminants; Active sampler

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Microbial biofilms; Biocatalysis for biosynthesis; Biodegradation of cultural heritages; Microbial electrochemistry; Extracellular electron transfer; Bacterial syntrophy; Environmental microbiology; Fermentation engineering; Biofuel & biomass; Food microbiology and processing; Microbial ecology

Rasha Maal-Bared, EPCOR Water Services, Edmonton, Alberta, Canada

Applied and environmental microbiology; Freshwater microbiology; Drinking water and wastewater; Microorganisms; Pathogens; Biofilms; Antibiotic resistance; Water quality; Water pollution; Food safety; Monitoring

Sheila Macfie, Western University, London, Ontario, Canada

Metal toxicity in plants; Metal localization in plants; Rhizosphere chemistry

Sonia Manzo, ENEA, Portici, Italy

Ecotoxicology; Nanomaterials; Aquatic environment; Seawater; Microalgae; Seaurchin; Risk assessment

Adriaan Albert Markus, Deltares, Delft, Netherlands

Water quality modelling; Numerical modelling and programming in various languages (notably Fortran, in relation to numerical modelling); Transport and fate of nanoparticles and microplastics in the aquatic environment

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Environmental chemistry; Biogeochemistry; Bioaccumulation; Persistent organic pollutants; Chemicals of emerging concern; Chemical inventories; Mercury; Polycyclic aromatic compounds; Arctic; Marine mammals; Fish
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Micro(nano)plastic; Plastic; Microfibres; Organic contaminants; Marine monitoring; Environmental monitoring; Wastewater treatment; Biodegradation of microplastics; Sensors; Biosensors
David Roser, UNSW Australia, Sydney, New South Wales, Australia
Mª Jesús Sánchez-Martín, IRNASA, CSIC, Salamanca, Spain
Pesticides, soil, water, organic amendments; Adsorption, desorption, degradation, mobility; Soil and water contamination by pesticides and emerging pollutants; Behaviour of pesticides in soils; Influence of organic amendments
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Environmental exposure and health risk of chemicals; Biological effect and toxic mechanism of environmental chemicals
Ralf Bernhard Schäfer, Universität Koblenz-Landau, Landau, Germany

Water quality; Rivers; Ecological effects; Chemicals; Aquatic toxicology; Invertebrates; Microorganisms; Modelling; Statistics

Jianwen She, California Department of Public Health, Richmond, California, USA

Environmental analysis; Persistent organic chemical analysis; Biomonitoring; Source apportionment; Non target analysis; Endocrine disruptors; Mass spectrometry

Wei Shi, Nanjing University, Nanjing, China

Environmental fate of emerging organic pollutants; Effect directed analysis based on instrumental analysis and bioassays

Andreas Skouloudis

Athanasios S. Stasinakis, University of the Aegean, Mytilene, Greece

wastewater treatment and reuse; Sludge management; Emerging contaminants; Aquatic pollution; Biodegradation; Ecotoxicity; Risk assessment

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Groundwater pollution; Agrochemicals; Emerging contaminants in groundwater; Industrial contaminants in groundwater; Shale gas exploitation

Qian Sui, East China University of Science and Technology, Shanghai, China

Pharmaceuticals and personal care products; Micro-plastics; Emerging contaminants; Analytical methods; Environmental behaviors; Source apportionment; Advanced oxidation processes; Treatment processes

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Biomagnification of major and minor elements along the sequential trophic levels of the marine biosphere; Bioavailability of metallic pollutants to benthic organisms as potential biomonitors in relation to the adjacent sediments and sea water; Analytical and chemometric assessment of food quality

Phong Thai, University of Queensland, Woolloongabba, Queensland, Australia

Wastewater analysis; Sewer-based epidemiology; Air quality monitoring; Air pollution epidemiology; Environmental monitoring

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Processes and Technologies for Urban and Industrial Wastewater Treatment; Modelling and Control of Biological Processes, Removal of Xenobiotic Compounds, Two-Phase Partitioning Bioreactors (TPPBs); Sludge Treatment; Soil Bioremediation

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Environmental analysis; Geochemistry; Oceanography; Marine and Antarctic science; Materials science; Human health areas

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Aerosol Science, atmospheric pollution, climate science, atmospheric modeling

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Soil pollution and remediation; Persistent organic pollutants; Polycyclic aromatic compounds; Antibiotics; Antibiotic resistance; Phthalate ester; Emerging Contaminants; Biochar; Bioavailability; Biodegradation and biotransformation of organic pollutants; Biofilms; Signaling molecules; Analytical method; Environmental monitoring

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Radio-isotopic tracing and photographing; Pesticides; Organic pollutants; Bioavailability; Degradation; Metabolism: chemical analysis

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Global cycling of POPs; Mechanism of long range atmospheric transport; POPs accumulation in polar region; Risk assessment of POPs, Brown carbon; Emerging contaminants;Tibet Plateau

Shaun Watmough, Trent University, Peterborough, Ontario, Canada

Ecosystem biogeochemistry; ecological impact of trace metals; ecosystem acidification; air pollution impacts on ecosystems

Jianming Xue, New Zealand Forest Research Institute Ltd., Christchurch, New Zealand

Biowaste and wastewater reuse; Emerging contaminants in biowaste and soil; Fate and transport of contaminants in terrestrial ecosystems; Antibiotic pollution and remediation; Biochar for environmental management; Plant uptake and translocation of contaminants; Plant-soil-microbe interactions; Phytoremediation of contaminated soils and water; Biowaste management and climate change

Ishwar Chandra Yadav, Tokyo University of Agriculture and Technology, Tokyo, Japan

Persistent organic pollutants; Brominated and phosphate flame retardants; Heavy metal pollution; Aerosols; South Asia; PM2.5; Solid waste; E-waste; Himalayas

Kun Yang, Zhejiang University, Hangzhou, China

Organics, adsorption, organic matter

Samantha Ying, University of California, Riverside, Riverside, California, USA

Trace elements; Soil; Biogeochemistry ; Redox processes; X-ray spectroscopy
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Occurrence and fate of organic micro-pollutants; Formation and control of disinfection by-products
Chaosheng Zhang, National University of Ireland, Galway, Ireland
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PAHs; Organic matter; Marine environments

GUIDE FOR AUTHORS

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INTRODUCTION

Aims and Scope

Science of the Total Environment is an international journal for publication of original research on the **total environment**, which includes the **atmosphere**, **hydrosphere**, **biosphere**, **lithosphere**, and **anthroposphere**.

totalenvironment.gif-Total Environment

The total environment is characterized where these five spheres overlap. Studies that focus on at least two or three of these will be given primary consideration. Papers reporting results from only one sphere will not be considered. Field studies are given priority over laboratory studies. The total environment is studied when data are collected and described from these five spheres. By definition total environment studies must be multidisciplinary.

Examples of data from the five spheres are given below:

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Cancer Research UK, 1975. Cancer statistics reports for the UK. http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/ (accessed 13 March 2003).
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