



Environmental Consciousness and Its Effect on Public Health

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Abstract

Human being is the part of his surroundings such as plant, animals, temperature, air and water. All the things present in surrounding have an interrelation for their particular need. The public health and their management are now a challenging phase of any nation. The World Health Organization (WHO), a worldwide organization working in community awareness for health. It conduct survey and many project or pilot studies to know about the health set-up and their effectiveness through statistical analysis and United Nation Environment Programme (UNEP) is a global effort conducted by WHO and UNEP to promote and facilitate action in developing countries to reduce environmental threats to human health, in support of sustainable development objectives. On behalf of the present status and nature of the environmental gear i.e. plant, animals, temperature, air and water amongst of them have been most contaminated and polluted due unstopped or excess use natural resources and which have the health hazard for public health in the means of development of various incurable disease and development of their handling or treating hands in respect to natural harmony. In foundation of the above assessment and facts, in short we can say that through developing effective programme for creating the awareness of environmental and public health programme, it may be make so easier to spread the basic information to stop the population enlargement which is essential for maintaining the excesses use of natural resources and their inverse effect on public health as well as animal health.

Key Words- Environmental Consciousness, Public Health, WHO, UNEP

Introduction

Human being is the part of his surroundings such as plant, animals, temperature, air and water. All the things present in surrounding have an interrelation for their particular need. This interdependence among human, animals and plants maintain a balance in the nature. Nature and human are interconnected or rather interdependent and should exist in harmony and balance. Nature means a surrounding environment having a balancing move towards its diversity and ecosystem in all respects.

Environment: An environment is an important component to maintain the balance between biodiversity and ecosystem. It is said that if the diversity creates the variety of life while environment makes the diversity significant and colourful towards the requirement of the balanced ecosystem. According to the living system of the modern era, the urban life and the environment of the most cities are now very tense and polluted and

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this is the sources of many modern and incurable problems that affect the public health and health system respectively.

Public Health: Public health is the science of protecting and improving the health of families and communities through promotion of healthy lifestyles, research for disease and injury prevention and detection and control of infectious diseases. Overall, public health is concerned with protecting the health of entire populations. These populations can be as small as a local neighbourhood, or as big as an entire country or region of the world (Chauhan, 2013). Public health professionals try to prevent problems from happening or recurring through implementing educational programs, recommending policies, administering services and conducting research in contrast to clinical professionals like doctors and nurses, who focus primarily on treating individuals after they become sick or injured. Public health also works to limit health disparities. A large part of public health is



promoting healthcare equity, quality and accessibility.

Environment and Health as Tools for Sustainable Development

Today's world of instant communications, delivering vital knowledge and evidence about environmental health problems and potential solutions, into the hands of policy-makers remains a formidable political, organizational and logistical challenge. The second thrust of the HELI (Health and Environmental Linkage Initiative) initiative, complementing the pilot projects, focuses on better use of assessment tools and improved overall access to knowledge for effective environment and health decision-making.

A dynamic web-based portal and paper-based tool kit for communications and training are being developed, and will be constantly updated and enhanced. They include: policy briefs on priority environment and health issues describing cost-effective, environmentally-sound approaches to addressing vector-borne disease; indoor and urban air pollution; chemical hazards; water quality and sanitation; and climate change impacts; description of, and links to, data sources and instruments such as Geographic Information Systems (GIS), useful for environment and health assessment and monitoring; useful references for more information on priority issues and to existing UNEP/WHO resources; tools and guidance on carrying out impact assessment and economic valuation of linked health and environment issues (Palmer, 1998). Such resources also make reference to the broader range of evidence and assessment tools that WHO/UNEP have developed and are refining constantly. These include: environment and health monitoring frameworks, providing the data upon which evidence of problems and potential solutions may be based; environment and health standards and multilateral environmental agreements, which set baselines and goals to be achieved; tools for comparative risk assessment/burden of disease assessment for quantifying environmental hazards in terms of their impact on human life and health; case-study experiences describing good-practice interventions; environment and health indicators that track progress to the goal; and tools for impact assessment.

Passion, Policy and Science in Environment and Health

Scientists are trained in dispassionate enquiry, an essential tool of the trade. At the same time, in the policy process, there is a need to frame compelling objective evidence on environment and health issues in terms valued by the public – and decision makers. Appreciating the complexities of the policy process and how scientific evidence is used, and might be used better, in that process has been a theme of HELI. The passion of politics must be harnessed to the scientific passion for knowledge about the root environmental causes of disease.

HELI's approach was designed around four key issues identified in the Needs Assessment Workshop (April 2003) involving both developed and developing country policy makers, and refined further in the global review of decision-making. More effective impact assessment procedures are needed in developing countries.

This can facilitate political and scientific exchange within a systematic and transparent framework. Impact assessment is a forum where science and policy interact – producing a synergy between scientific evidence and policy agendas. Analysis of environment and health costs and benefits is important to improved utility of assessment frameworks. Both economic and socioeconomic valuation put issues into monetary terms relevant to many policy-makers. Non-monetary measures, including death and disease burden and the rate/degree of environmental degradation, also are powerful indicators. Such exchanges can range from technical workshops to intersect oral government meetings and ministerial-level encounters. Participatory research allows policy-makers and stakeholders to "see" and "touch" the evidence for them. Building decision-maker and stakeholder awareness about environment and health problems, tools and policy options requires sustained and comprehensive communication strategies. Such strategies should describe potential "solutions" alongside the "problems," and relate to successful experiences elsewhere. Potential economic and poverty reduction gains should be communicated together with the health and environment gains. Policy-relevant briefing and training materials should be refined and adapted to local needs and issues.



Impact Assessment: A Bridge between Science and Policy-Making: Whenever a policy decision is made, it can be presumed that decision-makers have made an assessment of potential impacts. But was this process formal or entirely informal. Was the relevant scientific evidence about environment and health reviewed publicly and Systematically Impact assessment is the process link in the chain between evidence and decision-making. Yet formal impact assessments are not conducted for many strategic policy decisions. At the project level too, impact assessment processes may fail to consider health and environment in a linked and inclusive perspective. More effective and systematic impact assessment was thus identified as an important priority for HELI, and for improving environment and health decision-making overall. Over the past three and a half decades, a plethora of impact assessment methodologies have been developed. UNEP and WHO have supported the refinement and application of tools for environmental impact assessment (EIA), integrated assessment (IA), health impact assessment (HIA), and strategic environment assessment (SEA). Overall, there is increased recognition of the value of impact assessment methods that link sectors and disciplines more inclusively. By adapting existing methodologies so as to generate guidance that systematically takes account of health and environment impacts, HELI contributes to a more coherent assessment approach.

Review and Guidance

It is based on a global study by international experts in the field of impact assessment, synthesizing lessons and experiences from EIA and HIA as well as other assessment approaches. The review included interviews with decision-makers and practitioners, questionnaires to interested stakeholders and systematic literature review; addresses the general range of available impact assessment approaches and best practice for matching the approach with decision-making needs, priorities or frameworks; relates to both quantitative methods of analysis and qualitative methods (i.e. stakeholder dialogue) as an integral part of the assessment exercise; aims at being a practical tool to strengthen a decision-making process at country level that is transparent,

inclusive, scientifically sound and benefiting from best practice experience. As a bridge between science and policy-making, the assessment of linked health and environmental impacts can play a significant role in expanding the narrow focus and frequent shortcomings of sectoral assessment. It also ensures that the direct contributions of ecosystems to better health are duly captured in the decision-making process. Mid-level managers from health, environment, development, and planning sectors interview a fishing village resident in Lao PDR about the impacts of a nearby dam constructed three decades ago. Their findings will contribute to an impact assessment of new dams, now in the early planning stages. This health impact assessment exercise was part of a course conducted in 2003.

A Healthy Environment: Luxury or Necessity

The WHO reports shows that 5 children in developing countries die from malaria or diarrhoea. Every hour, 100 more children die as a result of exposure to indoor smoke from solid fuels. Every day, almost 3000 people in low- and middle-income countries die from road traffic injuries: in the poorest countries most of these deaths are among pedestrians. Every month, nearly 19 000 people in developing countries die from unintentional poisonings, often as a result of exposure to toxic chemicals and pesticides in their work or home environments. Environmental hazards and related illnesses kill millions globally every year. But while the victims share a common fate, their problems are not necessarily linked in either today's policy agendas or in the minds and actions of decision-makers. Estimated proportion of total disease burden caused by environmental risk factors, by region of the world.

Environmental Burden of Disease Globally: The environment and health issues not higher on policy agendas, particularly in countries where the disease burden is so great. A HELI review of environment and health decision-making in a developing country context described and analysed the driving forces that shape environment and health policy, synthesizing the results of over 50 in-depth interviews with experts and decision-makers globally as well as findings from an extensive literature review. The review concluded that the primary barriers to more effective policy are neither



a lack of evidence nor a lack of knowledge. They are economic, institutional, political and social. Macroeconomic factors such as trade globalization, market liberalization, debt burdens and structural adjustment policies are among the most powerful drivers of national political agendas and, indirectly, environment and health policies. The hidden hazards posed by hasty and improperly conceived projects may be overlooked; better environmental management may be regarded as a luxury that developing countries cannot afford. The goods and services provided by bio-diverse ecosystems, upon which particularly the poor may rely for healthy livelihoods, are not meaningfully taken into account within market-driven development processes. This leads to continued degradation of those natural resources with resulting health impacts (Subramanian, 2002).

A dearth of institutional resources, human capacity and "enabling" legal frameworks impedes adequate assessment of the complex links between health, environment, poverty and development options. For instance, irrigation schemes may yield benefits in terms of food security and health. But when irrigation and dam design is not sensitive to the surrounding ecosystem, the scheme may enhance the conditions necessary for disease vectors to thrive and thereby create new health impacts. Agricultural chemicals can be used constructively to increase yields, but they also can kill or maim farm workers and children, and infiltrate water sources, when chemical regulation and education is inadequate. A complex series of tasks is required to translate scientific evidence about such issues into policy. Common institutional barriers to the effective use of scientific information may include weak technical capacity, limited or ineffective legal and regulatory frameworks and debate driven by interest group pressures rather than by evidence. Data collected systematically according to scientifically acceptable criteria rarely determine policy on their own.

Large infrastructure projects that are popular symbols of development (e.g. urban "It is common practice to define poverty exclusively in financial terms. Yet someone surviving on one or two dollars a day in a run-down environment may well be far worse off than someone else, without any income at all, but living on fertile land. Highways, water purification plants) may be regarded as evidence or

indicators of good policy even when alternative strategies (e.g. improved public transport and bike lanes, better ecosystem protection of drinking water resources) might contribute to a more cost-effective package of solutions.

The cost and benefit of alternative strategies, in terms of impacts on health and environment, may not be fully considered. Environmental hazards, which may be unseen and/or emerge slowly over time, also compete as policy priorities with social, political, economic and humanitarian crises - some of which may be related to long-neglected environmental problems (e.g. floods and epidemics or drought and famine). In the division of more routine governmental tasks, however, health ministry's are focused on health care services and policies, which may not systematically address broader environment and development agendas.

Environment ministries, for their part, often are newer entities lacking sufficient influence and resources to promote, proactively, government investment in sustainable development policies. As a result, they tend to remain focused more upon "sect oral" concerns related to nature conservation and pollution. This institutional context generates barriers to coordinated action and mutually reinforcing strategies. Thus governments may make crucial policy and economic development decisions without substantive input on either health or environment. International institutions also have operated with separate and unlinked agendas. Agreements at recent international conferences and summits all emphasize the need to improve coherence and enhance the coordination of work at country level that promotes economic development, the environment, health and poverty-reduction. In a concrete, action-oriented international agenda the translation of evidence into terms and tools relevant to policy-makers is of critical importance. Renewed emphasis therefore should be placed on demand-driven approaches rather than supply-side solutions that generate knowledge for its own sake. HELI aims at making best use of existing knowledge to demonstrate that good environment and health policy is not a luxury but an essential feature of sound development processes. Increased road traffic has exacerbated air pollution in urban areas of Asia, Latin America and Africa, as well as the risk of traffic injury (Walker, 1992).



The Human Toll

Unsafe water- Unsafe water, poor sanitation and hygiene kill an estimated 1.7 million people annually, particularly as a result of diarrhoeal disease

Malaria- Malaria kills over 1.2 million people annually, mostly African children under the age of five years

Poorly designed irrigation and water systems, inadequate housing: Poor waste disposal and water storage, deforestation and loss of biodiversity, all may be contributing factors to the most common vector-borne diseases including malaria, dengue and leishmaniasis. Indoor smoke from solid fuels kills an estimated 1.6 million people annually due to respiratory diseases

Urban air pollution- It generated by vehicles, industries and energy production kills approximately 800 000 people annually Some cities are rediscovering the health and environment advantages of non-motorized transport alongside more high-tech approaches (e.g. high capacity bus and rail). Improved protection from risk of injury for pedestrians and cyclists remains a critical challenge.

Road traffic injuries- The road traffic injuries are responsible for 1.2 million deaths annually; low- and middle-income countries bear 90% of the death and injury toll. Degradation of the built urban and rural environment, particularly for pedestrians and cyclists, has been cited as a key risk factor Lead exposure kills more than 230 000 people per year and causes cognitive effects in one third of all children globally; more than 97% of those affected live in the developing world

Climate change impacts- The climate change and its impact including more extreme weather events, changed patterns of disease and effects on agricultural production are estimated to cause over 150 000 deaths annually. Unintentional poisonings kill 355 000 people globally each year

In developing countries, where two-thirds of these deaths occur, such poisonings are associated strongly with excessive exposure to, and inappropriate use of, toxic chemicals and pesticides present in occupational and/or domestic environments. Over the next 30 years, most of the world's population growth will occur in the urban areas of poor countries. Rapid, unplanned and unsustainable styles of urban development are

making developing cities the key focal points for emerging environmental and health hazards. These includes the synergistic problems of urban poverty, traffic fatalities and air pollution. In addition, increased urbanization and motorization and diminishing space for walking/recreation in cities is associated with more sedentary lifestyles and a surge in related non-communicable diseases. Globally, physical inactivity is estimated to be responsible for some 1.9 million deaths each year as a result of diseases such as heart ailments, cancer and diabetes Increased industrial and agricultural production has intensified poorer countries' production and use of both newer and older chemicals, including some formulations that are banned in other countries. OECD has estimated that the global output of chemicals in 2020 will be 85% higher than in 1995, and nearly one-third of the world's chemical production will take place in non-OECD countries, compared to about one-fifth in 1995. The shift of chemical production from more affluent to poorer settings could increase the overall health and environmental risks arising from the production and use of such chemicals. Already in many developing countries a range of toxic effluents are emitted directly into soil, air and water from industrial processes; pulp and paper plants; tanning operations; mining; and unsustainable forms of agriculture; at rates well in excess of those tolerable to human health. Along with the problem of acute poisonings, the cumulative health impacts of human exposures to various chemical combinations and toxins can be a factor in a range of chronic health conditions and diseases.

References

- Chauhan, Shiv. K. 2013. "Biodiversity, Environment, Ecotourism and Adventurous Sports: A Challenge and Opportunities for Uttarakhand, *Biodiversity and its Conservation- edited book of Satendra Kumar Yking Books*, Jaipur India: 79-89.
- Palmer, A. 1998. "Environmental Education: Structure and Practice" *Environmental Education* in the 21st Century.
- Subramanian, V. 2002. "Text Book in Environmental Science. New Delhi: *Narosa Publishing House*. Uttarakhand Tourist (website <http://www.uttarakhandbiodiversity.org>).
- Walker, Brian H. 1992. "Biological Diversity and Ecological Redundancy" *Conservation Biology* 6.1:18-2.

