

A STUDY ON THE ROLE OF PUBLIC HEALTH EDUCATION AND ITS IMPLEMENTATION

S.Kamalakaran

Associate Professor and Head of the Department, Department of Civil Engineering,
Adhiparasakthi College of Engineering

ABSTRACT

This article explores the notion of ecological sustainability in the context of public health education and the contribution Universities can make in creating environments that include ecologically sustainable practices. It considers the important role of environmental health in building a sustainable future for the population as a central plank of public health. It presents the evidence for the need for comprehensive approaches to ecological sustainability within the University and offers suggestions about how this can take place. It concludes by arguing that to date there is a substantial gap between the rhetoric and the reality in the University context.

Keywords: *ecology; education; environment; public health; sustainability*

1. INTRODUCTION

There are a range of ways in which public health can contribute to sustainability; including the sustainability of the environment in which we live, the resources we use and the contribution we collectively and individually make to ecological sustainability. However, it is very important for us to remember that whatever contribution we allocate to environmental health or public health in the debate about sustainability, the fundamental issue is that without the contribution of many disciplines to ecological sustainability we will see limited success. One of the key issues that many governments are facing now is balancing the requirement to limit global changes, and their consequent impacts on ecological sustainability, with the social, political and economic problems that may result from imposing these limits. As Smyth indicates our environment is the totality of what we live in, natural or constructed, spatial, social and temporal. It is an extension of us, its health requiring the same care as our own health. It is clear that our current way of life and reliance on resources are not sustainable. As early as 1972, at the Stockholm Conference on the Human Environment, the concept of sustainable development was being discussed it was to mark a significant paradigm shift in approaches to dealing with the environment and development, and heralded a major advance in thinking. In addition to that paradigm shift, the value of reconnecting environmental and public health is related to the long term benefits that will accrue. Proponents in both the environmental health and public health professions recognize that public health and environmental health are flip sides of the same coin. In truth, they are not separate fields at all. Public health *is* environmental health. As Parkes *et al.* quite rightly argue research and applied programs that integrate biophysical and social sciences with public health practice can go some way toward addressing the deficiencies in each approach when taken on its own. The roles of social and economic development, as both drivers and mediators of hazardous environmental exposures, and the need for an ecologically sustainable development are increasingly important challenges in environmental health and in public health.

2. THE GLOBAL CHANGE

Public health's mission has long been to investigate and address the impacts of significant social and environmental change on the public's health; however, now that the ecosystems that support us are so endangered, the sustainability and integrity of our planet must be considered synonymous with the sustainability of humans. As long ago as the late 1980s the World Health Organization (WHO), through the Ottawa Charter, was advocating for the creation of supportive environments. This notion reinforces the contention that our societies are complex and interrelated and that health cannot and should not be separated from other goals. The inextricable links between people and their environment constitute the basis for a socio ecological approach to health. This idea of sustainable environments clearly suggests that we need to encourage reciprocal maintenance to take care of each

other, our communities and our natural environment. The WHO was arguing for an emphasis on the conservation of natural resources throughout the world as a global responsibility over 20 years ago. In particular, the WHO argued for a systematic assessment of the health impact of a rapidly changing environment, particularly in areas of technology, work, energy production and urbanization—as being essential to ensure positive benefit to the health of the public. Despite these issues being raised by the WHO there are still numerous examples of continuing changes to our environment that are likely to impact on our wellbeing. These include climate change, the decline in the ozone layer, the reduction in biodiversity, and alterations in the physical environment and ecological processes. In addition to these global changes, the effects of climate change will, as the Intergovernmental Panel on Climate Change (IPCC) Third Assessment Report clearly states, fall disproportionately upon developing countries and people without the necessary economic resources, and thereby exacerbate inequities in health status and access to adequate food, clean water, and other resources. This is echoed in the recent Human Impact Report from the Global Humanitarian Forum which concludes that the people who are least responsible for greenhouse gas emissions are the world's poorest communities who suffer most from climate change. This report further concludes that climate change currently results in over 300,000 deaths, seriously affects 325 million people and results in economic losses of US\$125 billion. It is clear that the challenges posed by global environmental change are substantial and require urgent and ongoing commitment and leadership at all levels of government and society. As the interconnectedness of the environmental, economic, political, social, and spiritual challenges is becoming increasingly obvious, it is also clear that there is a need for a shared vision of basic values to provide an ethical foundation for the emerging world community. Such a vision is provided by the Earth Charter which provides sixteen interdependent principles for a sustainable way of life as a common standard by which the conduct of all individuals, organizations, businesses, governments, and trans-national institutions is to be guided and assessed. From an educator's perspective, Principle 14 emphasises the need to integrate into formal education and life-long learning the knowledge, values, and skills needed for a sustainable way of life. Therefore, from the outset, education has been at the center of the Earth Charter's purpose and a major focus of the Earth Charter Initiative's programmes.

3. ROLE OF PUBLIC HEALTH

What is the role for universities through undergraduate and postgraduate education, and continuing professional practice education, particularly in the public health arena, in making a significant contribution to ecological sustainability? Agenda 21 unambiguously reaffirmed that education was critical for promoting sustainable development and improving the capacity of the people to address environment and development issues. Why is education so important? Both formal and non-formal education is indispensable in changing people's attitudes so that they have the capacity to assess and address their sustainable development concerns. It is also critical for achieving environmental and ethical awareness, values and attitudes, skills and behaviour consistent with sustainable development, and for effective public participation in decision-making. In addition, as universities are an integral part of the global economy and since they prepare most of the professionals who develop, manage and teach in society's public, private and non-government institutions, they are uniquely positioned to influence the direction we choose to take as a society. Based on the way in which universities operate and the influence they have within the community, there would seem to be four interconnected elements that need to be addressed for them to achieve their role for sustainability: institutional policy and commitment, operational activities, teaching and research, and professional development/extension activities.

4. COMMITMENT AND INSTITUTIONAL POLICY

It is clear that without a high level of commitment from the university executive (for example, the Chancellor, President) the effectiveness of any sustainability activities will be limited. One indicator of commitment by a university to sustainability is whether they have signed the *Talloires Declaration*. Composed in 1990, this was the first official statement made by university executives of a commitment to ecological sustainability in higher education. It is a ten-point action plan for incorporating sustainability and environmental literacy into all aspects of university operations. Currently, 407 higher education institutions from over 50 countries have signed this Declaration. However, there is no monitoring of the *Talloires* signatories and there is no enforcement mechanism to ensure that they are following-through on their commitments. In fact, a number of reports have indicated that universities who have adopted this or other sustainability policies or declarations often fail to implement their basic commitments.

5. OPERATIONAL ACTIVITIES

As university campuses are like small cities, their impacts can be substantial. In addition to being large employers, their decisions on energy, waste and water use, or whether their purchasing decisions take sustainability into account, can all have a significant impact. Consequently, it is vitally important that universities take sustainability seriously in daily operations and in campus management, so as to reduce their ecological impacts and to provide good examples to students and the community. In this regard, a number of surveys have found that universities are undertaking substantial sustainability initiatives and are increasingly using sustainability principles when purchasing new equipment or products, and when constructing or renovating buildings. Accordingly, the greening of campuses' approach is one aspect of sustainability education that universities seem to have embraced, however, it is dominated by project-based operational activities, with linkages to research and teaching rarely achieved.

6. ACTIVITIES OF TEACHING AND RESEARCH

There are two ways in which sustainability can be incorporated into university teaching: one is to ensure that all degree programs produce sustainability-literate graduates, and the other is to produce some sustainability specialists. There are many advocates for sustainability to become a theme that transcends and encompasses all disciplines. In fact, Soskolne states that in our view, it is a disservice to permit any student in any discipline to emerge from an [tertiary] education without a deeper understanding of sustainability. While some universities mandate courses on sustainability as a requirement for graduation for all students, the integration of sustainability into mainstream curriculum is not highly developed, despite the international calls for this to occur (particularly through the UN's Decade of Education for Sustainable Development. In particular, the education of public health practitioners –must look beyond the biological risk factors that affect health and seek to also understand the impact on health of environmental, social, and behavioral factors. We would argue therefore that public health curricula should focus strongly on the concept of ecological public health 'as it has evolved in response to the changing nature of health issues and their interface with emerging global environmental problems. These new problems include global ecological risks such as the destruction of the ozone layer, uncontrolled and unmanageable air and water pollution, and global warming. These developments have a substantial impact on healths which often elude simple models of causality and intervention.

7. EXTENSION OF ACTIVITIES

Universities are well placed to provide professional development for practitioners as well as to undertake outreach/extension activities in the community, particularly through developing partnerships with schools, government, non-governmental organizations and industry. They should also support research partnerships that fulfill community objectives for sustainability across a wide range of disciplines. Despite some examples of universities undertaking extension projects which are designed to empower and educate community members; professional development activities for the community or to introduce their own academics to sustainability, and the teaching of sustainability, appear to be limited. Thus, considerable professional development of academic staff is needed to help them appreciate how they can lead the next generation to global sustainability. No matter what the mode of delivery, the discipline studied, or the setting through which the training is undertaken, universities should strive to ensure that they help students, staff and the community to: Understand the challenges and critical choices that humanity faces and appreciate the interconnections between these challenges and choices; comprehend the meaning of a sustainable way of life and of sustainable development, and to create personal goals and values which are conducive to a sustainable way of life; and critically evaluate a given situation and identify action goals to bring about positive change. For public health students and practitioners, these fundamental literacy's are critical because environmental problems and health are becoming progressively more complicated, inter sectoral and interconnected, and public health is becoming acknowledged more and more as a pivotal factor in sustainable development, and is a fundamental policy issue central to a country's economic development.

8. CONCLUSIONS

As Parks *et al.* State, recent trends in environmental health, ecology and health, and human ecology all suggest that the interface between sustainability, ecosystems, social systems, and health is fertile ground for optimizing environmental health interventions and maximizing public health gain. With an accelerated rate of economic development, the substantial increase in the world population and the globalization of trade, these modern realities have dramatically changed production methods and demand for goods in both developed and developing countries, and have become contemporary challenges for disciplines like public health and environmental health.

These changes in the way we live and the ever increasing impacts of human activity on environmental resources and systems highlight an ever increasing urgency for all to understand that population health is an important part of the concept of sustainability. Accomplishing sustainable social, economic and environmental conditions therefore underpins the achievement of population health. Further, documents such as the Earth Charter argue for the integration into formal education and more broadly into life- long learning the knowledge, values, and skills needed for sustainable living. In this context, universities play a critical role in embedding sustainability principles and understanding in society, through the training of future leaders and professionals, cutting edge research, and community outreach activities that empower local communities to implement sustainable principles and practices.

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