The Federation's Pages

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Bettina Borisch, Federation's Pages Editor

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Sustainable Development and Environment – Conflict or Convergence?

The Congress on Public Health took place in Kolkata in February 2015. Hundreds of public health leaders and experts from around the world and across India attended. We took this opportunity to present the most challenging public health problems we face in India in sessions called 'global consultations'. Participants helped elaborate the problems and discuss how to address them. We report here on one of several topics discussed.

Consultation on: Lack of Safe Water and Environmental Sanitation: A Critical Threat to Public Health

Key questions raised:

- (1) How critical is the threat of lack of Safe Water and Environmental Sanitation to Public Health?
- (2) What are the challenges of environmentally provoked NCD's/Vector-borne diseases?
- (3) How to address the critical challenges in maintenance of minimum ecological flows in our rivers?

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- (4) What is the way forward for sustainable development *vis-a-vis* ecological conservation?

Water and Sanitation is One of the Primary Drivers of Public Health

The World Health Assembly 1978 in Alma Ata adapted four key strategies for attaining health for all. One of these was “Promoting healthy lifestyles and reducing risk factors to human health that arise from environmental, economic, social and behavioral causes”. If the agenda has remained unfinished by a wide margin, the primary reason could be found in our failure to develop an enabling policy for promoting a hygienic environment conducive to healthful living.

The health outcome of the lack of sanitation and safe water is enormous: globally 4 billion cases of diarrhea, 2.2 million deaths per annum, and 62.5 million Disability Adjusted Life Years Lost . The World Bank estimates that 99.9 per cent of deaths attributed to poor water supply, sanitation and hygiene occur in the developing countries. To this, the new menace of the chemical contaminations of ground water sources, particularly arsenic and fluoride, have been added, along with the problems created by salinity and iron and toxic heavy metals and pesticides. The gravity and enormity of the problem is at once evident when we consider that about 30 per cent of our total usable fresh water resource of about 4500 billion m³ is stored underground.

South Asia has made considerable progress over the last 22 years. The proportion of people using improved sanitation has increased by 19 percentage points from 1990 to 2012 (compared with 15 points for the world as a whole). The proportion of people who practice open defecation has dropped by 28 percentage points over the same period, a faster rate of reduction than in any other region. Compared with 22 years ago, 422 million more people use improved sanitation. The proportion of schools with adequate sanitation has increased by 23 percentage points from 2008 to 2013, a faster rate than in any other region. However, substantial challenges remain. The pace of sanitation improvements has not kept up to population growth in India, Nepal, and Pakistan. In the region taken as a whole there were 93 million more people without access in 2012 than in 1990. It is estimated that there are still 681 million open defecators in the region (there were 771 million in 2000). Unfortunately despite developmental gains, India accounts for about 90 per cent of the open defecators in the South Asian region. Afghanistan, Bangladesh, Nepal, and Pakistan have much smaller numbers of open defecators.

In sanitation coverage, South Asia has the most severe urban–rural disparities in the world. There is a 44 percentage-point difference between the open defecation rates in rural and urban areas in the region as a whole, but there are large in-country disparities. The highest disparity is in India (53 percentage points), although this fell between 1990 and 2011. In 1990, 1 in 4 urban residents had no toilet, compared with 8 in 10 rural residents. By 2011 there were more toilets, and the difference between urban and rural settings had narrowed slightly.

Household wealth is also significant – the poorest households have far less access to improved sanitation than richer households in many South Asian countries.

Despite these problems, there have been some notable successes. In Bangladesh, open defecation in rural areas fell from 23 per cent in 2000 to 3 per cent in 2012. Nepal has succeeded in eliminating open defecation in 15 of its 75 districts and in more than 1600 of its village development committees. It should be noted that four of the eight countries in the region are on track to meet the MDG sanitation target – including Sri Lanka, which has already exceeded its target, achieving outstanding expansion from 69 per cent coverage in 1990 to 91 per cent by 2004.¹ Governments in South Asia are committed to address sanitation, with open defecation as a priority – in India with the Swachh Bharat Abhiyan (Clean India Campaign).

Environmentally Provoked Non-Communicable Diseases (NCD's)/Vector-Borne Diseases

Pollution of ambient air in the urban environment and indoor air pollution are causing acute respiratory infections along with cardio-vascular diseases, asthma, and lung cancer. A WHO report on the burden of disease from Household Air Pollution for 2012² reveals that the South East Asian and Western Pacific regions bear most of the burden with 1.69 and 1.62 million deaths, respectively. Women experience higher personal exposure levels than men and therefore higher relative risk to develop adverse health outcomes because of their greater involvement in daily cooking activities. The same report also reveals that the Western Pacific and South East Asian regions bear most of the burden with 1.67 million and 936 000 deaths, respectively.

Tuberculosis continues to be a serious environmentally provoked threat to public health because of poverty and malnutrition. Inadequate drainage and improper solid waste management are creating conditions conducive to vector breeding giving rise to vector-borne diseases like malaria, filaria, dengue, encephalitis, and so on. Cardiovascular diseases and cancer are

increasing in urban and industrial areas and psychological and neurological sickness because of noise pollution is also causing concern.

NCDs account for nearly half of all deaths in India.³ Among the NCDs, Cardiovascular Diseases account for 52 per cent of mortality (52 per cent) followed by Chronic Obstructive Pulmonary Disease, Cancer, Diabetes, and Injuries. Projection estimates have shown that unless interventions are made, burden because of NCDs will increase substantially. Though it would be difficult to project the exact burden of environment related NCDs, they may become one of the major public health problems in the region, unless adequate measures are taken to arrest the environmental degradation in urban and industrial areas. The emerging pattern in India is therefore characterized by increased exposure to risk factors like environmental pollution. The way out would be to subsidize and promote the use of cookstoves that use cleaner fuels, reduce emissions of harmful urban air pollutants from vehicles through better technology, and to increase use of mass transit. There is also need for reducing exposure to agro-industrial chemicals and waste by ensuring clean water for irrigation and managing pesticide use for crops and vegetables.⁴

Critical Challenges in Maintenance of Minimum Ecological Flows in Our Rivers

The Asian region continues to face serious water quality issues that contribute to freshwater scarcity, ill-health, and even deaths. Driven by population growth and the need for increased agricultural production, water resources are coming under intense pressure across Asia. The impacts are being felt by nature, and by people: 42 per cent of the deaths associated with unsafe or inadequate supply of water, sanitation and hygiene occur in Asia. Asian countries are making concerted efforts to address these problems but the pace and scale of this policy response must increase urgently.

The traditional agriculture-based economies of South Asia are giving way to industrial economies with serious environmental side effects, particularly in pollution. Efforts have been made to improve regulation, but the absence, in most cases, of effective governance makes enforcement very difficult. For example, in Pakistan only 5 per cent of national industries have provided environmental assessments.

Industrial pollution levels, indicated by biochemical oxygen demand emissions per USD 1000 of GDP, are highest in some Central and Northeast Asian countries, followed by South Asian countries. Major sources of pollution are industries producing metals, paper and pulp, textiles, and food and beverages. The mining industry is also a significant contributor.

It would be worthwhile to share the ecological initiatives in the Ganges, a river that flows across large territories and subjected to all forms of pollution.

The Ganga Action Plan was launched in 1987 in India for reducing pollution, yet the river remains polluted in its entire stretch. Almost all other major rivers and their tributaries are also seriously polluted. A major policy thrust in this regard has been the formation of National Ganga River Basin Authority. The Ganga Basin Management Plan envisages that the restoration of pure flow in all rivers of the Ganga basin will require, comprehensive actions concerning sewage collection, treatment and disposal processes. Maintenance of minimum ecological flows in our rivers remains a critical challenge, as it often clashes with our urban, industrial and energy development policies.

Development and the Environment: The Dichotomy

Without adequate environmental protection, development will be undermined; without development, environmental protection will fail. The next generation will see the world's population rise by 3.7 billion, even if progress in reducing population growth accelerates. Most of these people will be born into poor families. Economic growth is essential for sustained poverty reduction, but growth has often caused serious environmental damage.⁵

Such adverse effects can be reduced with effective policies whereby income growth will provide the resources for improved environmental management. The prevailing economic growth model is focused on increasing GDP above all other goals. While this system has improved incomes of a substantial minority, it has come with significant and potentially irreversible social and ecological cost.

Need for a change in the focus of economic growth and development

Past sustainability efforts have not focused sufficiently on fixing the failures of economic policies. The Kyoto protocol's market-based solutions cannot go very far in reducing carbon emission. It is not a solution to the problem of global warming, nor would it address the basic problems of consumerism and unsustainable growth.

In India, efforts are being made for environmental management in a sustainable manner during Economic Growth and Development.⁶ Past sustainability efforts have not focused sufficiently on fixing the failures of economic policies. At all levels of education provisions have been made for the knowledge of environment and its conservation. In the country many centers are providing special training for environmental management. Programs of environmental awareness have been launched through media. India is an active member of International Organizations concerning environment.

Several programs are going on under the United Nations Environmental Program (UNEP). The Government has recently started emphasizing the combined use of regulatory and economic instruments for improving environmental quality.⁷ The need of the hour is a change in the Focus of Economic Growth and Development with better coordination between government agencies, NGOs and the public for the proper management of environment quality to achieve sustainable development in the country.

An alternate vision for growth

The environmental mistakes of the past do not have to be repeated. Today, we have more choices and can choose policies and investments that encourage more efficient use of resources, substitution away from scarce resources, and the adoption of technologies and practices that do less environmental harm. Such changes will ensure that the improvements in population health subsequent to development are lasting.

The answer lies in adopting green economy policies that are socially inclusive and result in improved human well-being, while significantly reducing environmental risks and ecological scarcities and promoting equity. Gross Domestic Product (GDP) without social equity and eco-security is not the best indicator of development and well-being of a society.

Let us not forget what the great poet and Nobel laureate, Rabindranath Tagore, spelt out as a warning:

The standard of living in modern civilization has been raised far higher than the average level of our necessity. When this standard attains a degree that is a great deal above the normal it encourages the passion of greed. The unscrupulousness involved plays havoc the world over and generates a force that can coax or coerce peoples to deeds of injustice and of wholesale horror. When a passion like greed breaks loose from the fence of social control it acts like forest fire, feeding upon the life of society. The end is annihilation.⁸

Kumarjyoti Nath^{a,b} and Madhumita Dobe^c

^aInstitution of Public Health Engineers, Arsenic Task Force, Government of West Bengal, CG-184, Sector-II, Salt Lake City, Kolkata 700 091, India.
E-mail: nathkj@hotmail.com

^bArsenic Task Force, Government of West Bengal, India.

^cDepartment of Health Promotion & Education, AIH&PH, Kolkata 700 073, India.
E-mail: madhumitadobe@gmail.com

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