

## Review

# Indicators for assessing progress made towards improving environmental health

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**This paper presents some process indicators that would be indicative of noteworthy genuine efforts and progress made by third developing countries in improving their environmental health. There is a coordinated international effort to call upon governments, UN agencies and the private sector, to protect children from environmental threat. Indicators give countries a credible and useful way to assess the status of children's environmental health and to monitor the success or failure of interventions to address the problems. The paper particularly presents the perspective of developing world that is necessary as state of affairs which are unique to third world countries for example, inadequacy of infrastructure, improper planning for development, weak regulatory mechanism; all have direct and indirect bearing on environmental health.**

**Key words:** Environment, health, indicators.

## INTRODUCTION

There is a coordinated international effort to call upon government and non governmental organisations; inter governmental organisation and the private sector, communities, and the UN Agencies to protect children from environmental threat. One key step is to develop and use children's environmental health indicators that would be cost-effective, would allow nations to work together and learn from each other, and would enable the international community to develop and construct further actions.

([http://www.envirohealthaction.org/upload\\_files/childrens\\_indicator\\_report.pdf](http://www.envirohealthaction.org/upload_files/childrens_indicator_report.pdf)).

The challenge was to emerge ten years from now, having addressed linkage between children's health and environment in a meaningful and measurable way. In ten years, the children on this planet should be healthier and happier as a result of decisions and actions we all take today.

Indicators give countries a credible and useful way to

assess the status of children's environmental health and to monitor the success or failure of interventions to address the problems. Thus, policy-makers are better positioned to improve conditions for children. Children are 100% of the world's future, and by addressing the problems that face the youngest members of society, governments improve the health of generations to come.

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## THE PERSPECTIVE

Environmental health is increasingly gaining attention in international arena. Even in India environmental movement is gaining momentum. There is increasing insistence on undertaking environmental and health

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impact assessments (Rajan, 2011) before sanctioning new projects are sanctioned. New programmes and interventions are being undertaken to reduce adverse environmental health impact, which need to be constantly monitored. At present there are no standard set of indicators that would help in monitoring progress made by individual countries in improving their environmental health, that are applicable globally across the world. Hence, there is a need for constant review of existing indicators and develop new ones. The need for review is greatly felt as health management information systems in developing countries are poorly functioning for the use of sophisticated indicators, that is, DALYs and QALYs.

At the same time, there could be some process indicators that would be indicative of noteworthy genuine efforts and progress made by third developing countries in improving their environmental health. The perspective of developing world is necessary as state of affairs that are unique to third world countries, for example: Inadequacy of infrastructure, improper planning for development, weak regulatory mechanism, and have direct and indirect bearing on environmental health. Some of the process indicators are as follows:

### **Policy decision**

The Ottawa charter of health promotion (Ottawa Charter for Health Promotion First International Conference on Health Promotion, 1986) in 1996 has underscored the fact that the policy decisions taken in non-health sector have their repercussion on health, directly or indirectly. Some of the examples from India are:

- (a) Transport sector: Delhi government's policy of compulsory conversion of diesel engines to Compressed Natural Gas (CNG) engines has resulted in significant reduction in air pollution in Delhi.
- (b) Judicial sector: Proactive judicial system i.e., court ordering relocation of polluting industries around the historical monument of Taj Mahal in Agra.
- (c) Agriculture sector: Provision of free electricity to farmers has direct bearing on the ground water table and availability of safe potable drinking water.

### **Intersectoral coordination**

Indian experience has shown that malaria could be the by-product of improper developmental strategy. Many policy makers consider malaria as an environmental problem rather than a medical problem (Narayan, 1997; Rajan et al., 2011) that could be exemplified as follows:

- 1. Indiscrete urbanization leads to unchecked increase in construction activity which in turn leads to increased mosquito breeding at the construction sites. Labour migration from endemic areas for construction, serve as reservoir of infection.

- 2. Construction of Indira Gandhi canal in Rajasthan brought with it mosquitoes borne disease, because no proper environment/health risk assessment was made.
- 3. Trenches dug by telecom department for laying down cable wires remain unattended for weeks leading to water logging during rainy season, leading to mosquito breeding which eventually contribute to diseases like malaria, filaria, dengue etc. Vector borne disease could be another good indicator to assess environmental health in developing countries.

### **Regulation use of medical technology**

- (a) Judicious use of X-ray (radiation during pregnancy, resulting in increased risk for foetal malformation and leukaemia).
- (b) Radiological therapies in oncological institution.
- (c) Proper hospital waste management, disposal of plastic waste, with discrete use of incinerators.

### **Water supply**

- (a) Replacement of metal pipe with fibre pipes. The metal pipes are the source of many heavy metal contamination of drinking water.
- (b) Planned laying of underground pipe system, the drinking water pipe should always be running above the sewage pipe to avoid leakage contamination
- (c) Availability of safe drinking water within 15 min walk from home.

### **Active municipality**

- (a) Refuse collection by municipality promptly and regularly.
- (b) Banning of open refuse transport.
- (c) Banning of Service type daily removal of night soil by human.
- (d) Regular sanitary survey of source and distribution of drinking water supply.

### **Biodiversity**

- (a) Promotion of social forestry programme. Good vegetation dilutes free toxin quantity in the atmosphere.
- (b) Intense use of agricultural land with rampant use of fertilizers causes increased nitrate contamination of ground water, which is suspected to cause produces meth-hemoglobinemia

### **Town planning**

- (a) Good town planning is a must, over crowding is a

risk factor for many childhood infections like measles (Aaby, 1988), chicken pox, etc.

(b) Distance between main roads from the residential area has bearing on vehicular pollution on health (Lal and Patil, 2001)

(c) Implementation of by-laws related to residential area, for example, presence of industrial units in residential areas.

### Peoples' movements

Ongoing active peoples' movement could serve as important indicator for risk management and promoting environment health. Very often it is important to organize people to act as reassurance groups for collective action to force political will. Some individuals and groups take on the role of professional lobbyist and build networks. These networks try to exert influence on government and policy makers to ensure favorable bargain for the society at large.

Some of the well known people's movements from India include:

- (a) *Chipko movement* against deforestation
- (b) *Narmada Bachao Andolan* against dam for its adverse social and environmental impact.
- (c) *Fishermen's movement* against trollers and deep sea fishing.
- (d) *Jan Swasthya Abhiyaan* - for increasing people's control over health.

### CONCLUSION

The enlisted indicators may seem to be too 'global' in nature, but the purpose is to stress on the need to have indicators that are tangible and appreciable by the communities at large. Demystification of health is the proven way of ensuring greater community participation to realizing the goals set for improving people's health. It is well demonstrated that when people are encouraged to assist in the process of assessment and monitoring of their environment their future behavior towards the natural world changes. These aspiration are not an end in themselves, each one of them serve as a tool for evaluating progress made by individual countries and can be used for decision making, planning and monitoring to achieve the vision of sustained progress in improving environmental health.

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