DEV INTERNATIONAL DEVELOPMENT University of East Anglia

DEV research briefing 6
Global Environmental Justice

Dec 2012

DEV research briefing

Health, environment and the ecosystem services framework: A justice critique

In the Millennium Ecosystem Assessment (MA) reports published in 2005, discussion of the contribution of ecosystem services (ES) to human wellbeing achieved a global platform. Statements about health were prominent, and took on a double meaning, embracing both the contributions of ES to human health and, in a much wider sense, invoking the 'health' of the Earth's biosphere. This research briefing considers the potential contribution of the ES framework to analysis of health and environment issues, focusing predominantly on the social dimensions of environment-health linkages.

The arguments presented draw on a book chapter (see Source) in which existing literature on ES and health is reviewed and discussed. The briefing should be read as an exploration of the issues, intended to stimulate critical debate rather than make definitive conclusions. It examines how health issues are articulated within ES approaches to date, and critically assesses the merit of the ES framework from a social science perspective. In essence, it asks: what can we expect from a research approach framed around ES?

1. Health aspect of ES not yet subject to sufficient critical review

Health is one of the core components of the ES framework, as articulated, for example, in the Millennium Ecosystem Assessment and the UK's Ecosystem Services for Poverty Alleviation (ESPA) funding programme, but remains one of the least scrutinized aspects of the ES approach. As yet, there appears to be very little critical social science literature on the health aspects of ES and the health implications of ecosystem management. Empirical studies on environment and health that explicitly refer to ES are also remarkably few. While health-related research under the ES umbrella is at a nascent stage, considerable increases in funding are likely to be directed to this theme. Large initiatives are already emerging, and it will be interesting to see in practice how these research projects will articulate and analyze health and social science dimensions.

To lay out the terrain of ES and health more explicitly, some of the key direct linkages between ES and health are outlined in Box 1.Indirectly, ES also impact on many other aspects of human livelihood and security, which in turn have ramifications for health.

The ES framework brings advantages in its broad approach to environment and health and in its potential for highlighting how the health implications of ES use and ecosystem, degradation may play out for different social groups. But, as the work of several ES authors point out, wellbeing-environment linkages are complex, confounded, socially structured and dynamic. While the ES framework can be a beneficial tool for analysis, it may also promote certain conceptualizations of wellbeing-environment linkages that do not necessarily challenge and may potentially exacerbate health injustices.

Benefits of the ES framework's broad approach to health

Health is sometimes articulated in a narrow, sectoral sense in terms of remedial health care, with a focus on curative action. The ES approach instead fits with broader conceptions that extend the realm of health not only to preventive actions but also to the idea of achieving good health, as a positive resource for life rather than seeing health just as the avoidance of ill-health.

This expanded conception encompasses all the physical and psychosocial elements that we perceive to constitute a 'healthy' mind and body.

This work results from the project 'Just Ecosystem Management' (NE/I003282/1) funded with support from the Ecosystem Services for Poverty Alleviation Programme (ESPA) and the I-REDD+ project funded by the European Union (Project No. 265286). The ESPA programme is funded by the Department for International Development (DFID), the Economic and Social Research Council (ESRC) and the Natural Environment Research Council (NERC).

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In this sense, health includes aspects such as nutritional status and freedom from fear and anxiety. It also links health much more explicitly to wider aspects of wellbeing, including material and social needs and how these too are required to achieve a positive life experience.

Provisioning of health resources: Water supply - food supply - fuel supply - medicinal products
Regulation of health risks: Infectious diseases - water and air quality - natural hazards
Cultural services for psychological and emotional wellbeing: Contact with natural landscapes

Box 1: Direct linkages of ecosystem services and human health

2. Environmental determinism or social complexity?

Because of the way it highlights differing ecosystem uses and values, the ES approach could be a useful tool for revealing 'hidden' injustices for different social groups in terms of environment and health. An ES framework could direct attention toward the fundamental needs of the poor in developing countries, such as provisioning and supporting for water and food, and in industrialized countries, through attention to environmental quality for the urban poor.

But in order to do so, such a framework will have to account for distributive inequities of access to ES benefits. This generally requires a move away from the larger-scale systems approaches that have often been favoured under the ES framework toward more targeted social groupings. There is potential for the ES approach to shift toward a more differentiated social analysis - one that is necessary if the approach is to contribute to poverty alleviation as envisaged in the MA and the ESPA formulation.

However, it is also important to ask how the ES framework approaches complexities of causality. In several of the key texts, there is a clear intention not to fall into the trap of environmental determinism and to acknowledge the complexity of factors that shape the human health-environment relationship. Nevertheless, these wider social aspects are generally articulated as mediating factors. They are seen to mediate in an environment-to-health outcome process, in which the prime causal factor of interest is the state and dynamics of ecosystems. The focus therefore tends to be on one line and direction of causality. Moreover, the focus in the ES framework as it relates to health is in itself skewed toward one pattern of causative outcome.

There is a strong tendency to view health as a positive product of ecosystem integrity and ill-health as a negative product of environmental degradation. As described below, such an orientation risks confining the scope of analysis. It appears also to be associated with a research bias toward 'natural' or 'semi-natural' ecosystems (and their degradation) rather than the highly-altered environments in which most of the world's population resides. Are ES researchers likely to focus on environmental health issues such as urban air pollution or household sanitation that cannot so readily be associated with integrity of natural ecosystems? In these senses, the way that the ES framework tends to be operationalized is likely to provide only a partial way of examining justice implications and human priorities for environment and health.

3. Ecosystem protection and health

ES approaches often highlight a supportive role of ecosystem protection for health and emphasize 'win-win' solutions that could result from the preservation of ecological integrity. This conceptualization fits neatly around discourses of sustainable development and provides a compelling argument in a generalized and inter-generational sense. However, this sometimes occludes from discussion the recognition that there can be trade-offs for wellbeing from some ecosystem management actions, often with clear equity and justice dimensions. Environmental protection itself can constitute a 'hazard' to health and wellbeing for certain sectors of the population. For example, there is increasing reference made to the benefits for human health of protected area conservation. However, the implications of this form of biodiversity management include a set of potential threats that perversely mirror the positive effects (Box 2). With few exceptions, ES discussions of protected areas to date seldom refer to these negative effects.

Positive implications of biodiversity management for health
• Ecological control of disease vectors • Preservation of sources of food, fuel, shelter materials and medicines • Protection against natural hazards provided by vegetation cover • Recreational and emotional value of contact with natural landscapes
Negative implications of biodiversity management for health
• Exposure to certain zoonotic and vector-borne diseases • Loss of access to wild sources of food, fuel, shelter materials and medicines • Exposure to wild animal attacks on people, livestock and crops • Displacement of people from protected landscapes with multiple impacts on health and wellbeing

Box 2: Negative and positive implications for human health of biodiversity conservation through protected areas.

The equity and justice dimension: The justice dimension of environmental management trade-offs are both distributive and procedural in relation to health.

The negative health and wellbeing implications of ecosystem protection pose issues of distributive justice, since they are likely to be spatially and socially concentrated. There are also scale asymmetries in that risks are concentrated at the local level while the benefits of ecosystem protection are likely to accrue over wider areas. The starting point for just ecosystem management has to be a more honest recognition of, and debate over, these trade-offs. However, there may also be procedural injustices in decision processes and the containment of dissent surrounding ecosystem management, including how discursive constructions around positive benefits for wellbeing and public safety are promoted to meet different normative goals of ecosystem protection.

4. Strengths and limitations of the ES framework for analysis

The ES framework is instrumental in drawing attention to the value of ecosystem functions. In essence, it is grounded in a premise that humanity is better off in a world in which ecosystem integrity is more effectively conserved. Can the ES framework be a vehicle for social justice too – potentially revealing distributive inequities and trade-offs (who is benefiting most from environmental health resources and where are the health risks falling) – even if only partially? Or are the underlying instrumental approaches and environmentalist ethics generally likely to occlude injustices, especially those related to ecosystem management?

ES are by definition positive for human society. However, the very decision to focus on services derived from ecosystems draws from an ethic that, while anthropocentric in message, starts with the assumption that conservation of ecosystems in as 'intact' a state as possible is generally positive for human health. This, I argue, directs researchers to look for these types of links, and/or to focus narrowly on the negative consequences of ecosystem degradation.

While the ES approach has clear merit for answering some questions in this field, its orientation brings limitations in analysis. There is no denying the importance of recognizing ES value for health and wellbeing or the usefulness of work to assess, map, and systematize ES issues. But, it does appear to have analytical limits to how far it can tackle the difficult social and political questions surrounding environmental health access, priorities, equity, justice and poverty alleviation.

Can the ES framework also direct attention to the potential health threats (or dis-services) that may be associated with ecosystem protection? **Title:** Saltwater crocodile, Orissa, India. **Author:** Thomas Sikor

Even though the concept of ES is broadly framed, how likely is it that ES-based research and practice will focus on priority environmental health issues associated with poverty in developing countries?
Title: Peri-urban dwelling, Mekong Delta, Vietnam **Author:** Bui Thi Thuy Hong

Further reading on ES and health:

Butler, C. and W. Oluoch-Kosura (2006) 'Linking future ecosystem services and future human wellbeing', *Ecology and Society,* vol 11, no 1, pp 1-16.

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Pretty, J.N., et al. (2011). 'Health values from ecosystems'. In: The UK National Ecosystem Assessment Technical Report. UK National Ecosystem Assessment, UNEP-WCMC, Cambridge.

WHO (2005) *Ecosystems and human well-being: health synthesis,* A report of the Millennium Ecosystem Assessment, World Health Organization, Geneva.

Source: Few, R. (2013) 'Health, environment and the ecosystem services framework: a justice critique'. In Sikor, T. (ed) *The justices and injustices of ecosystem services,* Earthscan, London (in press).

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