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26. RE-EXAMINING HEALTH PROTECTION IN INTERNATIONAL ENVIRONMENTAL REGULATION

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26.1. INTRODUCTION

A vast body of international environmental law and its domestic implementation provide for the protection of human health and the environment, but in this chapter I argue that this has not happened. Using examples from the regulation of water, climate change and environmental health in the European Community, I examine the inherent pitfalls of the legal regimes in maximizing health protection and then explore the health and environmental protection linkages in both law and fact, and argue for more robust environmental legal regimes to protect human health and the environment.

26.2. THE HEALTH DEFICIT IN ENVIRONMENTAL REGULATION

26.2.1 General

The importance of environmental law for health protection has prompted a re-examination of the role of environmental legal regimes for the protection of health (*Von Schirnding et al., 2002*). However, there is increasing concern that international and national environmental law have not been optimized to advance the protection of public health (*Onzivu, 2006*). Six examples demonstrate the ineffectiveness of international and domestic environmental law to buttress health protection:

1. The need to highlight social and health protection in the global environmental agenda, including sustainable development, was stressed in the outcomes of the Report of the World Summit on Sustainable Development in Johannesburg (*United Nations, 2002*).
2. Global water regulation is focused more on water allocation than on protecting water quality (*Biswas et al, 2009*), a key determinant of health.
3. The regulation of transboundary waste under the Basel Convention on Transboundary Movement of Hazardous Waste and their Disposal has failed to optimize health protection. For these reasons, the Conference of the Parties to the Convention adopted

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the Bali Declaration on Waste Management for Human Health to bolster health protection under the Convention (*Secretariat of the Basel Convention, 2006*).

4. The global climate legal regimes under the United Nations Framework Convention on Climate Change and the Kyoto Protocol have focused on mitigation and energy issues and constrained human health issues to adaptation (*Onzivu, 2010*).
5. The importance of strengthening health protection in environmental regulation has led to renewed action by the European Union to integrate health protection measures in European Commission (EC) environmental regulation. For example, the EC has adopted legal and policy instruments to strengthen health protection in European Community environmental law (*McEldowney & McEldowney, 2010*).
6. Key tools for domestic environmental regulation that serve to implement international treaties have constrained health protection especially in developing countries (*Onzivu, 2006*).

Obsolete environmental and public health laws, limited impact assessment of health issues, and the fractious collaboration between the health and environmental sectors, is a challenge. This has led to rethinking the need to reinvigorate health in global environmental regulation; this chapter contributes to this discourse.

26.2.2. Environment-and-Health linkages

Health protection is interlinked with environmental regulation. Environmental law is derived from public health law, notably from the public health regulation of environmental ills in Victorian Britain (*Bell & McGillivray, 2008*). United States (US) environmental law also originated in public health laws, developing largely from the statutory and public policy precedents in public health and worker safety legislation throughout the twentieth century”(*Lazarus, 2007*).

Environmental challenges such as poor sanitation, lack of access to safe water, air pollution, use of chemicals, and climate change have continued to adversely affect public health (*UNDP, 2006; Onzivu, 2009*). Furthermore, a plethora of international environmental legal instruments provide for health protection as a core objective (*Sand, 1992*).

A healthy balance between the managing natural resources for their aesthetic benefits and sustainable development requires a higher level of health protection in environmental protection. Health is human capital, essential for ensuring intergenerational equity (*Pearce &*

Barbier, 2000). Human health is also intimately tied to ecosystem health that sustains human life, as well as to complex interactions between the environmental, socio-cultural and economic factors (*Forget & Label, 2000*).

The social pillar of sustainability is defined to include human and societal capabilities, implying public health protection (*Lehtonen, 2004*). Natural capital includes humans, flora and fauna, and their complementarities have been expounded by the following questions (*Daly, 1995*). What good are human lungs without the natural capital of flora that take up carbon dioxide that helps to replenish oxygen essential to human life? What is the use of fossil fuels healthy human capital? To address these questions, health and safety risk assessment has integrated human health, ecosystem integrity and economic concerns (*Mehta, 1997*). Human capability as social capital highlights health as a bridge between the ecological, economic and social in sustainable development (*Chiesura & de Groot, 2003*).

26.2.3. Environmental law as global health law

The World Health Organization (WHO) defines health as a “state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (*WHO Constitution, 2006*). This definition implicates the importance of protecting health in environmental law, a view echoed by scholars who have linked health to human capability and quality of life (*Ruger, 2009, Gostin, 2008*).

Global health law includes environmental treaties, rules, regulations, and dispute settlement mechanisms that all promote health (*Fidler 1999*). Environmental treaties with a health objective such as the Stockholm Convention on Persistent Organic Pollutants arguably constitute a body of global health law. WHO’s influence in environmental health law derives from the vast body of soft law adopted by WHO and the provision of vital scientific evidence for environmental regulation. WHO has provided scientific evidence for global environmental normative instruments in *inter alia*, water, climate change, toxic substances, pollution and the urban environment (*Burci & Henri-Vignes, 2004, Westra, 2006*). WHO hosts UN environmental forums such as the Intergovernmental Forum on Chemical Safety. WHO contributes to the global climate legal regime by providing expert input to the Subsidiary Body of Scientific and Technological Advice and the Nairobi Work Programme (*Onzivu, 2010*). Additionally, the WHO African Region and UNEP have convened the Inter-ministerial conference on health and environment in Africa to address African environmental health challenges (*WHO, 2011*). The resulting Libreville, Luanda and Yamoussoukro

Declarations highlight the need to reinvigorate health protection in environmental regulation and governance.

26.2.4 On the effectiveness of environmental treaties

Effectiveness is a concept that requires difficult normative, scientific and historical judgements. There are several types of effectiveness: legal, problem-solving, economic, political and normative (*Young, 2006*). Others view effectiveness in terms of treaty objectives, levels of participation, implementation and information, financial and capacity building support as well as operation, review and treaty adjustment. (*Sand, 1992*) Legal effectiveness offers the best means to assess environmental treaties on health protection because of the challenges of obtaining accurate data for problem solving and political effectiveness.

International environmental treaties require State parties to implement and enforce a treaty. Treaty compliance helps reduce threats to human health (*Onzivu, 2006*). While good compliance rates have been observed (*DiMento, 2003, Bankobeza, 2003*), weak implementation also occurs (*Barrett, 1999, Emory, 2000*). Compliance must achieve the ultimate goals of a treaty to make it successful.

A treaty should be interpreted in good faith including in the light of its object and purpose (*United Nations, 1969*). A material breach of a treaty includes the violation of a provision essential to the accomplishment of the object or purpose of the treaty (*United Nations, 1969*). The following three case studies highlight the limits of environmental law in reinforcing health protection.

26.3. CASE STUDIES OF LEGAL REGIMES

26.3.1. Freshwaters: Limits of the legal regime and example of the Senegal River Basin

Diarrhoeal diseases continue to kill and cause disease especially in children in the developing world (*UNDP, 2006*). Globally, about 2.5 million child deaths from diarrhoea occur annually (*Pinto, Velebit & Shibuya, 2008*). International water law helps in tackling health challenges facing shared freshwaters but this law is largely pre-occupied with allocating water quantity rather than the quality and health challenges of water management (*Bruch, 2009*).

Four legal principles underpin the management of shared water resources (*McCaffrey, 2007*):

1. Absolute territorial sovereignty grants the state the unlimited right to exploit its water resources.
2. Absolute territorial integrity provides that no action of one state shall have influence on the territory of another.
3. Limited territorial sovereignty and integrity attempts to reconcile the freedom of use of water resources with the right to freedom from unwanted interferences to the water resource, and establishes equality of rights of each riparian state to an international water course (*Caponera, 1992; Brunee & Toope, 2002*).
4. The doctrine of community of interests provides that parties of a shared river have a community of interests in the use of a river. (*P.C.I.J, 1929; ICJ, 1997*).

Unfortunately, these principles and the integration of sustainable development and human rights into water law have not effectively optimized public health protection in water quality regulation. These shortcomings have led to several legal strategies. First, riparian states have adopted sustainable water management laws such as the Protocol for the Sustainable Management of Lake Victoria (*East African Community, 2003*). Second, riparian states have adopted legal instruments addressing public health issues regarding the management of shared freshwaters. An example has been the Protocol on Water and Health to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes that aims to protect human health through better governance of water, ecosystems and waterborne diseases (*United Nations, 1999*). A third example is the integration of human rights principles in basin legal regimes as is seen with Incomati and Senegal. The UN General Assembly Declaration of a human right to water and sanitation has reinforced this trend (*United Nations, 2010*). Efforts to include health when managing shared fresh waters face further challenges. The regional procedural mechanisms of these shared freshwater regimes are weak as is their domestic governance of health. This undermines health protection.

The legal regime governing the Senegal River Basin demonstrates this situation. The Senegal River Basin is home to millions of people, and many of whom live along the river. The states of the Basin are Guinea, Mali, Mauritania and Senegal. The Convention on the Statute of the River Senegal of March 11, 1972, declared the Senegal River an international river, affirmed cooperation in the development of river resources, freedom of navigation and creation of an Organization for the Development of River Senegal. The Convention Creating

this Organization aimed to implement the purposes of the Statute, to perform technical and economic studies, and create a legal capacity to carry out these purposes. After the creation of the L'Organization Pour la Mise en Valeur du Fleuve Senegal (OMVS) in 1972, and the later adoption of the 1978 Works Convention, several dams were built. However, the dams increased the waterborne diseases of bilharzia, malaria and cholera. By 1994, 90% of the inhabitants of the river basin were infected; malaria and cholera became endemic and the human health costs far outweighed the economic gains (*Sow et al, 2002*).

This case shows the limits of one of the most innovative international water instruments of the time to promote health, but an integrated water basin management agreement that included the protection of public health was not envisaged. Even more recently, the innovative 2002 Water Charter provides for sustainable development and a human right to water (De Charzounes et al, 2005), but without comprehensive health-protecting measures.

26.3.2. Health in evolving domestic climate legislation around the world

Climate change poses a grave threat to human health (*IPPC, 2001, 2007; WHO, 1999*). However, health protection in the UN Framework Convention on Climate Change (UNFCCC) (*UNFCCC Secretariat, 1992*) and Kyoto Protocol (*UNFCCC Secretariat, 1998*) law has not been optimized. This is because the substance of the treaties is biased towards mitigation, but health is largely confined to adaptation measures. With few Conference of the Parties health decisions, limited participation of the health sector, poor reporting and financing of health, health is relegated to the peripheries of both UNFCCC and Kyoto (*Onzivu, 2010*).

These limitations also exist in climate laws adopted by developed nations. For example, the United Kingdom and New Zealand have adopted comprehensive climate legislation, but the laws have not optimized public health requirements. The UK Climate Act of 2008 focuses on emission and carbon reduction (*OPSI, 2008*), despite recognizing the need to address the social costs of climate change (*Stern, 2006*). The Act lacks synergy with UK public health law. The Act's Committee and sub-committee on climate change lack a clear mandate to address climate change and health coordination as well as fragmentation. The New Zealand Climate Change Act faces similar health deficits (*Parliamentary Counsel Office, 2002*).

These examples demonstrate the failure by the Parties to optimize health protection. Several developing countries are streamlining and adopting new climate-specific legislation to implement their obligations under the UNFCCC or Kyoto Protocol (*UNFCCC, 1992*) but they do not optimize health protection (Onzivu, 2006).

An LSE study has reviewed climate legislation in Brazil, China, India, Indonesia, Mexico, Philippines and South Africa (*Globe Centre for Climate Change, LSE, 2011*). It found that trends in domestic legislation focus on carbon markets, energy efficiency, renewable energy, forestry and adaptation but health issues have low priority. Weak inter-sectoral coordination undermines health protection and what legislation exists is compromised by poor implementation and enforcement, inconsistent policies and legislative priorities across health and other sectors, poor compliance, and inadequate capacity and resources (*Onzivu, 2009*). Moreover, framework environmental laws have not effectively addressed public health issues and impact assessments lack a comprehensive health component.

Comprehensive public health laws in developing countries could address the weaknesses of climate law. Unfortunately, public health laws in many developing countries are dangerously obsolete (*Onzivu, 2006, 2009*). They were largely adopted in the colonial era to deal with localized public health threats without trans-boundary considerations. Therefore, buttressing health protection in the implementation of global climate law is pivotal for the international community.

26.3. 3. Health in European Union (EU) Environmental Law and Policy

The EU is a leader in developing and implementing international environmental law (*Kramer, 2003*). The Treaties of Maastricht, Amsterdam and Lisbon, have progressively expanded the legal basis for environmental protection in the European Union. As a result, the European Community has adopted environmental Regulations, Directives, Decisions, Recommendations and opinions on many environmental issues (*Kramer, 2008*). The European Court of Justice has also passed important environmental regulatory decisions.

EC environmental law aims to protect both human health and the environment. However, the laws have failed to coherently and progressively optimize health protection in an integrated manner. Several developments highlight this deficiency. First, environmental quality and its link to human health are highlighted in the EU Sixth Environmental Action

Plan. Framework EU legislation that regulates environmental health includes: the Water Framework Directive, the Regulation concerning the Registration, Evaluation and Authorisation and Restriction of Chemicals (REACH), the proposal for a directive on ambient air quality and cleaner air for Europe, and the proposal for a framework directive on pesticides.

Second, in 2003, the Commission adopted a Communication on a European Environmental and Health Strategy. The strategy aimed to reduce the disease burden caused by environmental factors in the EU, to identify and prevent health threats caused by environmental factors, and to strengthen EU capacity for policymaking in this area. This Communication was followed up by the European Environment and Health Action Plan (EEHAP) 2004-2010 which proposes an integrated information system on environment and health as well as a coordinated approach to human bio-monitoring to assess the environmental impact on human health. The Action Plan aimed to generate the information to analyse all potential impacts, assess whether current action is sufficient, and identify areas where new action is needed.

In June 2004, a Communication on the EEHAP focused on health priorities in health information, human bio-monitoring, research, indoor air pollution, traffic pollution, plus training and education. Despite these corrective measures, a 2007 Mid-term Review of the Action Plan highlighted some achievements, but significant failures in implementing the Plan.

Third, health is a priority of the 2006 EU Sustainable Development Strategy which reaffirms the importance of impact assessment, where the social, environmental and economic dimensions of policies are assessed in a balanced way (*Council of the European Union, 2006*). A Strategy review in 2009 determined that the overall development of health in the EU is inadequate (*Commission of the European Communities, 2009*). Despite EC collaboration with WHO on issues such as climate change, indoor air quality, tobacco control and injury prevention, continued exposure to air pollution, the limited integration of public health concerns across EC environmental law has undermined the efficacy of the strategy for health protection.

26.4. IMPLICATIONS FOR POLICY

26.4.1. Environmental health as a global public good

The UNDP defines a global public good as one with benefits that are strongly universal in terms of countries (covering more than one group of countries), people (accruing to several, preferably all population groups) and generations (extending to both current and future generations, or at least meeting the needs of current generations without foreclosing development options for future generations) (*Inge et al, 2003*). Hence, environmental health is a global public good because it provides a positive externality in reduced health burdens around the world, at the community, national and global levels (*Smith et al, 2003*). As a global public good, health promotion in international law, including environmental protection, is pertinent (*Von Schirnding, 2007*).

The challenge for the international community lies in the financing of global public goods. For example, poorer countries have contributed least to the climate problem, but they have the fewest resources to mitigate its consequences (*Onzivu, 2010*). Developed countries must combine the binding legal obligation with ethical responsibilities to finance adaptation programmes promoting human health and the environmental objectives of climate change mitigation (*WHO, 2011*). A strong argument exists that richer countries must compensate poorer developing countries for their greater contribution to climate change by financing adaptation costs (*Farber, 2007*). The United Nations Compensation Commission set a precedent in awarding compensation for both environmental and public health claims (*UN, 1991, Payne, 2005*). Therefore, a global public goods perspective provides a critical framework to optimize health protection in international environmental legal regimes on a wide range of issues.

26.4.1. Reinforcing impact assessments for health

A key type of instrument to bolster the protection of human health in environmental regulation is the mandatory impact assessment. These include environmental impact assessment (EIA), strategic impact assessment, and sustainability impact assessment (*Sands, 2003*). However, the requirement to assess the health impact of all environmental actions under environmental laws in many countries has been limited (*Morgan R K, 2003*). When health aspects are addressed, EIAs tend to focus on only the negative effects of changes in the (bio) physical environment and ignore the effects of modifications on other health determinants, such as socio-economic and health promoting benefits (*Kwitkowski & Ooi, 2003, Onzivu, 2006*). Owing to the limitations of environmental impact assessments for health and other social issues, many developed countries have established legal and institutional frameworks for integrated environmental impact assessment, but most

developing countries have not. (Onzivu, 2006) Optimizing health protection in environmental regulation requires an evaluation of the scope of health protection in any environmental regime. Evaluation refers to a careful retrospective assessment of the merit, worth and value of administration, output, and outcome of government interventions, which is intended to play a role in future, practical situations (Vedung, 1997). The EU has institutionalized the evaluation of laws and policies under its “smart regulation” through the policy cycle, from the design of legislation to when it is revised (European Commission, 2010). This has helped to improve the functional quality and effectiveness of new legislation. A key feature of smart regulation is the Impact Assessment Board which provides independent quality control over the Commission's impact assessments. Since its creation in 2006, it has produced over 400 opinions accessible to the public.

26.4.2. Enhance institutional coordination.

The constituents of environmental regulation often involve the environmental, health and other sectors that may stem from the objectives of a specific environmental treaty or other law. To optimize health protection in environmental law, collaboration should occur amongst the inhabitants of an environmental regulatory space. Some treaties mandate the creation of multi-sectoral coordination bodies for domestic implementation. Therefore, the membership of such coordinating mechanisms should include both the ecological and health aspects of the legal regime. Significant membership from the health sector can enhance equity, participation and recognition for health issues. Multi-stakeholder governance also requires that not only state interests be considered but also civil society (Karkkainen, 2002). Hence, a treaty regime process becomes an administrative, shared, exercise where multi-stakeholder processes are sites where, to enhance quality and legitimacy, regulatory problems are defined, innovative solutions devised, and institutional relationships enhanced (Freeman, 1997). Additionally, public health laws in developing countries must bolster the political, economic, social, environmental, and institutional contexts of emerging environmental health threats such as climate change. Similarly, domestic environmental laws need to be reformed to promote interventions that maximize health benefits.

26.4.3. Redefining the scope of the social pillar – a health pillar?

The social dimension is commonly considered the weakest ‘pillar’ of sustainable development, most notably in reference to its analytical and theoretical underpinnings

(Lehtonen, 2004). Despite the increasing discourse on social sustainability, the interaction between the ‘environmental’ and the ‘social’ is largely uncharted. Until recently, sustainable development was perceived essentially as an environmental issue, concerning the integration of environmental concerns into economic decision-making. The political acceptability of sustainable development depends on its capacity to respond to the persistent social problems that seem to have surpassed environmental issues as matters of public concern (Lehtonen, 2004). The demand for an appropriate analytical framework for the three pillars of sustainability is demonstrated by the Organisation for Economic Cooperation and Development (OECD) Council of Ministers’ call for OECD Environmental Performance Reviews (EPRs) (OECD, 2001).

According to the EC, achieving sustainability in practice requires that economic growth supports social progress and respects the environment, that social policy underpins economic performance, and that environmental policy is cost-effective (European Commission, 2001). As the 20th anniversary of the Rio Declarations approaches, it is timely to adopt a specific legal instrument that clarifies the scope of each pillar of sustainability. It can also be argued that the health deficit in global environmental regulation can be cured by adopting a public health pillar of sustainable development. This will address the ambiguities of public health being classed in the social pillar, plus applying an effective advocacy tool for environmental health protection under the environmental pillar and avoiding the consideration of public health as utilitarian, reflecting the economic pillar. Therefore, a public health pillar would provide an effective framework to protect the health of the world’s poorest, especially those in the developing world.

26.5. CONCLUSIONS

The linkages between health and the environment and the goal-oriented nature of environmental regulation have demonstrated the need to reinforce public health protection in global environmental law. Support for the recognition of a fourth pillar of sustainable development has a sound justification in both law and fact: the health protection potential of environmental regulation has been underutilized in the progressive development and implementation of international and domestic environmental law.

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