Environmental Security Studies

Environmental security studies analyze both the confluence of foreign policy and environmental security particularly in the aftermath of the Cold War, and the linkages between security cooperation and global environmental risks. They result from an opening in the fields of foreign policy, defense studies and security cooperation, wherein researchers have tended to move away from a narrowly defined military and strategic understanding of threat, vulnerability, risk and national interest. In a post-Cold War era characterized by growing transnational flows, emerging environmental movements and a global political process of ecological awareness-building, changes produced in the regional and global environment have become a critical area on the security agenda. However, the term *environmental security* has acquired multiple meanings, and has gone through contentious academic and policy debates about how both environment and security can be connected. Neither scientific programs nor policy agendas have so far been able to produce a commonly agreed definition of environmental security, which also shows the academic relevance and the policy-building interest of a continuous reflection in this research field.

In the 1960s the first efforts were deployed to articulate environment and security. They were generally connected with the impact produced by humans on the security of nature, animals, and plants, but also with the linkages between development and quality of life. These first interpretations of environmental security have shed light on the misuse of pesticides, fertilizers, and the threats associated to nuclear energy. As in the cases of Rachel Carson's book *Silent Spring* (1962), Aldous Huxley's article *The Politics of Ecology: the Question of Survival* (1963) and Kenneth E. Boulding's notion of spaceship Earth (1966), these perspectives have emphasized the need to secure the integrity of ecosystems in order to ensure mankind's survival. Mercury poisoning associated with the Chisso-Minamata disease (1959) and the Torrey Canyon shipwrecking off the western coast of Cornwall in England (1967), among other environmental disasters, have played a key role in this context.

In the 1970s, other readings analyzing the environmental effects of war and refugee movements have developed, and research has also tackled issues related to the connections between environment and development. It was the case of the *Only One Earth report* written by Barbara Ward and René Dubos, Edward Goldsmith's *Blueprint for Survival,* and the *Limits to Growth Meadows report,* all of them published in 1972. They all expressed an overreaction to some of the supposed dangers of environmental degradation to human security. The United Nations Conference on Human Environment (Stockholm, 1972), despite the fact that it has ended with a largely dead minimalist consensus among States on twenty-six principles and one hundred nine non-binding recommendations, has paved the way for future environmental cooperation, has led to the establishment of global and regional environmental monitoring networks, and allowed for the creation of the United Nations Environmental Program in Nairobi. In its Final Declaration there is not a single mention to environmental security, although it is said in its Principle 21 that "States have (…) the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of

areas beyond the limits of national jurisdiction". Herein resides the idea of environmental threats to the national interest of a State which should eventually produce a change in the conception of foreign and defense politics.

Since the 1992 United Nations Conference on Environment and Development held in Rio de Janeiro, most of academic debate has been conceptual, having brought about several schools of thought. Some researchers have analyzed the significance of environmental stress as a contributing factor to conflict in many developing countries, generally in an attempt to relate environmental scarcity (environmental degradation or the depletion of renewable resources) with violent conflict. Research has also developed on environmental change produced by human activities and conflicts, and shifted to examining how environmental stress may contribute to conflict in combination with other relevant factors. Since 1989, for instance, Thomas Homer-Dixon and his team have produced a significant body of research on the connections between large-scale human-induced environmental stress and mass violence in developing countries. This team of researchers has analyzed the links between water scarcity and conflict, rapid urbanization and urban violence, environmentally induced migration and ethnic violence, among other issues, having conducted case studies of environmental stress and violence in Rwanda, South Africa, Bangladesh, India, Pakistan, China, Nicaragua, Mexico, etc.

More recently research has highlighted the importance of disputes arising from access to natural resources such as water, oil or minerals for strategic purposes. Some researchers call them *new wars*. It is clear that for some what needs to be secured remains predominantly the survival of the State, and in this sense environmental insecurity can be read as synonymous with environmental threats to the Nation-State (e.g. military operations may impact on environment, the environment may be manipulated or contaminated as target during wars). For other researchers environmental security may have a much broader scope, including the security of individuals and communities, and the security of nature itself. Some more critical researchers always associate environmental security with issues of inequality in North-South relations, social class and revenue distribution; herein the central research questions are: whose security is at stake? Who defines the need to protect what and for whom?

These theoretical debates presented briefly in this entry also show clearly that the relationship between environment and security is historically and politically complex and controversial, and many factors play a role in it. The cause-and-effect relationships between tensions and vulnerabilities are multi-dimensional, and the links between the various political and economic components may be direct or indirect. These vibrant discussions also reflect different concepts of nature and the very distinct social representations of what should get counted as part of the environment. One of the dangers of several approaches is that they often dichotomize human beings and nature. On the one hand, deep ecology may often see nature as a subject in itself – a subject that requires protection and for which technical norms should be set up. On the other hand, anthropocentric visions may always define the centrality of human interests over the environment. If one understands the notion of environment as including humans, then the way we define environmental problems alters, and one may come to a reformulation of

the concept of environmental security in terms of broader human security. What constitutes the environment is in this respect a key conceptual matter for our understanding of environmental security.

Environmental security and foreign policy

Foreign policy has traditionally referred to a series of actions followed by one nation to deal with another nation, another region or an international issue in a multilateral setting. In this connection, a State's foreign policy would be based on values (democracy, promotion of peace and human rights, rule of law, etc.) and national interest, and would usually be aimed at preserving the State's economic and political goals abroad as well as its position in the world. Foreign policy analysis has classically oriented its lenses to the actions of national governments, principally those related to diplomatic or military issues, thus reflecting an overly simplified view of a world justified in the name of a well-established sense of national interest and threats to national security. Today the media, the corporate sector, lobbyists, think tanks, environmental and human rights non-governmental organizations, ethnic groups, social movements, among other actors, play an increasingly important role in trying to influence foreign policy in many countries. Furthermore, with the end of the Cold War, the *in/out* divide has lost its absolute relevance, and there has been a sharpening interest in domestic policy issues, such as energy policies, ecological and health issues, the use of chemicals in agriculture or the impact of genetically modified organisms in the environment. These developments have deeply changed the analytic field of foreign policy, its agendas, decision-making processes, as well as the definition of social practices of its stakeholders. Taking into account environmental security is but another intellectual and political challenge put forward to both the epistemic community and the world of practitioners of foreign policy.

In fact, Braden Allenby (2000) suggests that environmental security may be an important evolution in the definition of what constitutes the national interest of States in international policy systems. Because the previous apparent stability generated by the ideological confrontation between capitalism and communism has broken down, global environmental changes and the need to promote environmental security world-wide potentially affect more easily both foreign policy and security agendas. Environmental issues can no longer be thought of as merely subsidiary components of industrial, social, political and economic systems. There is a movement of environmental problems from an "overhead" to a "strategic" position on the global agenda. This movement from "periphery" to the "center" occurs at many different scales within firms, industrial sectors, society itself, and governments. They may differ in detail and timetable, but have many fundamental similarities in each case, and across regions both North-South and East-West.

This happens also because there is an important constellation of environmental issues (energy, access to natural resources, climate chage and sea-level increases, biodiversity-related wealth, dangerous waste management, etc.) which support the fabric of a country security and its territorial integrity. They may also threaten and be of most concern for

foreign policy analysts and decision-makers. They challenge two comfortable classical assumptions which have been at the basis of traditional views of foreign policy: the first assumption to be challenged is that the Nation-State is relatively absolute in the definition of its sovereign security interests, and the second is that only inter-State relations (particularly within Cold War conflicts between capitalism and communism) define global geopolitics. From a state-centric perspective, security is national, thus environmental threats to national security should be dealt with by national authorities. The integration of the notion of environmental security (and insecurity) into the field of foreign policy makes these assumptions at least in their absolute form much less valid.

It is in this connection that the Worldwatch Institute had already demanded in 1977 to broaden the sense of national security. Lester R. Brown, in *Redefining National Security*, had reaffirmed that threats to countries and societies should stem less from relations with nations and more from relations with nature. Jessica Mathews makes the same argument in her 1989 article on *Redefining Security*. Even within more traditional realist scholarship, one can find George Kennan who publishes in 1985 that the world environment would be one of the two threats facing mankind, the other being military and terrorist attacks. Extreme versions of Realism, such as the geopolitical theories of major-general Karl Haushofer, look at the security implications of strategic raw materials. Both German and Japanese expansion in the 1930s would partly have been a search for raw materials. Some researchers see 2003 President George Bush's intervention in Iraq as an attempt to secure the oil resources of the Middle East.

Indeed, the foreign policy of the United States of America has begun to evolve in response to these recent environmental security challenges, in part by recognizing the need to manage a new set of issues, broadening the generally accepted and cozy concept of security as part of a larger national security mission. In a speech at Stanford University in 1996 Secretary of State Warren Christopher had explicitly recognized the need to include additional dimensions in American foreign policy, noting that "our Administration has recognized from the beginning that our ability to advance our global interests is inextricably linked to how we manage the Earth's natural resources", and the great relevance to "contend with the vast new danger posed to our national interests by damage to the environment and resulting global and regional instability". Irrespective of the rhetorical dimension of such a statement, US Secretary of State then concluded on a strong note: "That is why we are determined to put environmental issues where they belong: in the mainstream of American foreign policy". In the case of Japan, in his 1980 Report on Comprehensive National Security, the Prime Minister asserted that security would encompass economic vulnerabilities, natural disasters, environmental degradation and ecological imbalances.

These developments confirm what Thomas Homer-Dixon and Jay Blitt, in their 1998 book *Ecoviolence,* had produced as their key findings in the analysis of linkages between environmental scarcity and foreign policy: (1) scarcities of renewable resources produce civil violence, instability and conflict; (2) the degradation and depletion of renewable resources causes environmental scarcity; (3) powerful groups capture valuable resources while marginal groups migrate to ecologically sensitive areas; (4) environmental scarcity

constrains economic development and produces migration; (5) existing distinctions between social groups may be sharpened by environmental scarcity; (6) environmental scarcity weakens governmental institutions and states; (7) environmental scarcity can also cause ethnic confiicts, insurgencies and *coups d'état*; and (8) the intemational community can be indirectly affected by these conflicts generated by environmental scarcity. These discoveries support assumptions of political ecology researchers who sustain that environmental degradation often leads to economic underdevelopment, which can in turn diminish political stability in South countries and societies.

Global environmental risks and security cooperation

There is no doubt that today's human activities constitute a significant and frequently destructive feature of the earth's ecosystem. Interpretations may vary, but UN sources suggest that around forty per cent of the entire natural photosynthetic product of the biosphere is appropriated by human beings. It is clear that the world faces a global environmental crisis, and, inseparable from this, a coincidental crisis of growing social inequality and poverty. Unprecedented environmental and social changes pose huge challenges to the inter-State system, one key question being if and how a global set of local sovereign States would be capable of saving the biosphere from environmental degradation and pollution. Many signs indicate a need for society's cross-sectoral attention to the environment as an underlying security issue. This sentiment had echoed through literature on environment and ecological problems, but also through the opening words of the Brundtland Report in 1987: "The Earth is one but the world is not. We all depend on our biosphere for sustaining our lives. Yet each community, each country, strives for survival and prosperity with little regard for its impact on others".

If it is true that many discussions on the nature of security tend to define it fundamentally as military and thus not open to environmental concerns. Since the end of the 1980s some debate has been devoted to global environmental risks, and to the threats that they represent to collective security. Al Gore 1992 book, *Earth in the Balance*, had mentioned global risks such as the production and trade of highly toxic chemicals, the loss of biodiversity, ozone depletion, climate change, marine degradation, desertification and deforestation. The environment, peace, and security chapter of *Our Common Future* was not subject to much negotiation at the 1992 United Nations Conference on Environment and Development in Rio de Janeiro.

Developing countries did not endorse a global dialogue on environmental issues within the context of conflict and security, reacting negatively to any multilateral treatment of environmental security proposals within UN forums. Coalitions of developing nations, mainly the Group of 77, perceived the security frame as a box of Pandora that, once opened, could formally menace their claims of sovereign control over their resources. Moreover, developing leading nations (Brazil, China, India, and Malaysia, among others) tend to consider that predominantly North geopolitical concerns about the impacts of environmental conflicts upon national sovereignty and the destruction of the global

commons associated with comprehensive security have largely dominated environmental security negotiations and policy-making to date. Their criticisms focus on the failure of this security approach to address the causes of inequality and injustice that underpin poverty and environmental degradation at local and global levels. Representatives from developing nations support that global change has more impact on those least able to protect themselves from its effects, such as the poor and coastal communities at risk from severe flooding and climate change spillovers.

Therefore, the world of inter-State relations has not welcomed the ideal of environmental responsibility as another normative principle in international relations, arguing that it would justify breaches in State's sovereignty and legitimate foreign interventions by stronger countries. That is why some authors such as Norman Myers tend to defend the individual-level of analysis, i.e. security should apply mostly at the level of the individual citizen as a basis of political stability. In his viewpoint, security should not be a function of stable macro-social processes (such as socio-political, economic or even military systems); rather, it should be seen as a goal to be achieved at the micro-level of human existence. Another type of definition is provided by ecological security approaches, which tend to consider that environmental degradation, by undermining mankind's means of subsistence, threatens the security of ecosystems. Ecological security takes into account the need to provide for the physical circumstances and conditions of the needs of a community without diminishing natural stocks. Other approaches, for instance the one supported by the United Nations Development Program, are inclined to privilege human security as an over-arching concept. As a consequence, environmental security and human rights would be inextricably linked. In this case, security should become an all-encompassing term relating to the social, economic, political, and ecological well-being of individual human beings.

Irrespective of the level of analysis, all these perspectives agree to the idea that environmental threats pose long-term dangers to security, and that the causes of environmental insecurity are related to population growth, degradation, over-use and abuse of resources, the depletion of finite global resources, trans-border effects of environmental degradation or the energetic impact unsustainable consumption patterns. Apart from the intrinsic shortcomings associated with the inter-State system to deal with global environmental security issues, another major obstacle that may stand in the way of effective global governance mechanisms and structures relates to the extraordinary power of transnational corporations. Of the 100 largest economies in the world, 51 are corporations. The top 500 corporations may now control almost two-thirds of world trade. Although some corporations may be commended on their growing movement for voluntary corporate social responsibility, this approach may in many cases be linked with mere public relations *greenwashing*. What are the needed measures to regulate corporate behavior in order to guarantee environmental security world-wide?

As Edward Page (2000) affirms, the concept of security appears to be a clear example of a concept that is prone to endless, irresolvable dispute regarding its meaning and policy application. The literature on environmental security is very much shaped by the assumption that the behavior of States is determined by the structure of power relations in

international relations. Particularly in the 1990s, this literature has also been under the influence of a credo that no regulatory mechanisms should guide or control corporate behavior. In this sense, security would be restricted to the need to protect a population and a territory against foreign threats while at the same time defending the interests of the State. Questions related to scope and content would be withdrawn from the policy debate, but we insist: what is the nature of the societies, organizations and institutions whose security matters from the point of view of security discourse? What environmental phenomena put them at risk and render them insecure? Who is threatened by environmental insecurity?

As Steven Ney (1999) affirms, it is necessary to recall that evaluating different models, or conceptual maps, of environmental security is not a straightforward task. Using Graham Allison's terminology, models can be considered *perceptual lenses* that allow us to make sense of the world: a theory is a way of seeing as well as a way of not seeing. As such, models are tools with which policy actors may construct arguments in the course of policy negotiation and deliberation. Models can have a pragmatic impact on policy-making, and by extension, they may be designed solely to affect the policy process. They may perform as well as inform. That is why it does not make sense to assess models in isolation of their argumentative contexts and concrete policy settings in which they are to be employed. As constructivist and critical researchers would recall, the often implicit normative assumptions that underpin the different approaches to environmental security should also be analyzed. For instance, one of the explanatory powers of many environmental security approaches are based on the assumption that increased population growth inevitably leads to environmental degradation. By the same token, however, this argument does not take into consideration how individual and social consumption patterns are structured, and how some of them may impact more strongly on the environment. It is true that the various theoretical approaches to environmental security contribute to promoting global environmental issues into policy agendas world-wide, but the question that environmental security studies should also pose relates to how these issues are being brought into the agendas.

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See also: Environment, Environmental Issues, Environmental Policy, National Interest, Security and Defense Policy, Security Cooperation.

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