

Environmental Security and Governance in the Americas

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EXECUTIVE SUMMARY

The security of states in the Americas — their economic stability, the health and well-being of their citizens, and their territorial sovereignty — is increasingly threatened by a growing range of environmental challenges. The challenges come from development patterns that place communities at heightened risk of natural disaster, the long-term impact of population growth and land use decisions, poorly managed resource exploitation, and the lack of strategic energy policies. Security challenges come from environmental conditions that increasingly distort migration patterns within and across borders. They also come from poor sanitation and industrial wastes that can imperil health without sound management practices and technology.

Environmental security is not a new issue, but it has new urgency. Natural disasters tax economies heavily — particularly in the Caribbean basin, and most experts agree that the real cost of disasters such as Hurricanes Mitch and Georges, and the recent earthquakes in El Salvador, was exacerbated by poor development patterns and inadequate land use planning. Yet environmental security concerns go well beyond disaster mitigation, as Mexico's battle with childhood lead poisoning and Santiago de Chile's growing incidence of respiratory illness demonstrate. This range of challenges threatens the viability of communities and economies in the region, and the prosperity that governments seek for their people cannot be sustained, or broadly attained, where investors fear loss and liability associated with environmental conditions.

Despite the growing range and intensity of environmental concerns, the link between environmental policy and regional security is poorly understood and rarely viewed comprehensively. Instead, the nature of the environmental security threat, along with the complex interactions through which it is realised, are more likely to paralyse than animate relevant institutions. The time has come to analyse these environmental concerns strategically, and to address priority concerns through regional co-operation and inter-disciplinary co-ordination. Co-operative effort can begin with the Environment Ministerial in Canada, and it can be furthered by making environmental security a priority for action in the upcoming Summit of the Americas in Quebec City.

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By highlighting environmental security as a Ministerial and Summit priority, governments can:

- Address some of the most high profile, costly regional concerns of recent years (in human and economic terms) through concrete, measurable action to improve environmental governance.
- Promote the convergence, refinement and harmonisation of critical aspects of the Santiago Summit's confidence and security building measures and the Miami Summit's sustainable development partnerships.
- Build on and focus human security concerns by placing citizens' health, well-being and prosperity at the centre of a strategic, risk-based analysis of non-traditional security priorities.
- Recognise recent work in both the defence and environmental sectors in the region and guide further complementary action in light of regional economic priorities.
- Respond to the repeated call of Caribbean states to pay special attention to environmental and resource issues as a matter of national and regional security, while acknowledging that the challenge is not unique to the Caribbean basin.
- Ensure concrete progress by calling for the development of specific indicators to measure the nature and degree of environmental security challenges in the region and the ability of governance frameworks to respond to these challenges.

RÉSUMÉ

La sécurité des États dans les Amériques — leur stabilité économique, la santé et le bien-être de leurs citoyens et leur souveraineté territoriale — est de plus en plus menacée par un éventail croissant de problèmes environnementaux. Trois raisons expliquent ces problèmes: les schémas de développement qui font courir aux collectivités un plus grand risque de catastrophes naturelles, les conséquences à long terme de la croissance démographique et les décisions concernant l'utilisation des terres. Ces problèmes sont attribuables à une mauvaise gestion de l'exploitation des ressources, qui est susceptible de déboucher sur la vulnérabilité des écosystèmes et des collectivités, et à l'absence de politiques énergétiques stratégiques. Les problèmes de sécurité tiennent aux conditions environnementales qui faussent de plus en plus les schémas de migration à l'intérieur des pays et entre ceux-ci. Ils proviennent aussi d'une piètre salubrité et des déchets industriels qui peuvent mettre en péril la santé si l'on ne met pas en place de bonnes pratiques de gestion et une technologie appropriée.

Le problème de la sécurité environnementale n'est pas nouveau, mais l'urgence qu'il suscite est nouvelle. Les catastrophes naturelles taxent fortement les économies, surtout dans le bassin des Caraïbes, et la plupart des spécialistes s'entendent pour dire que le coût réel des catastrophes, comme les ouragans Mitch et Georges et les récents tremblements de terre au Salvador, est imputable à de mauvais schémas de développement et à une urbanisation mal planifiée. De fait, les préoccupations vont bien au-delà de l'atténuation des conséquences des catastrophes, comme la lutte que le Mexique livre à l'empoisonnement des enfants par le plomb et l'incidence croissante des maladies respiratoires à Santiago (Chili). Cet éventail de problèmes menace la viabilité des collectivités et des économies de la région, et on ne peut maintenir ni même atteindre en général la prospérité que les gouvernements cherchent pour leur population lorsque les investisseurs craignent les pertes et les responsabilités associées aux préoccupations d'ordre environnemental.

Malgré l'éventail et l'intensité croissants des problèmes environnementaux, on comprend mal le lien entre la politique environnementale et la sécurité régionale et on le perçoit rarement dans un contexte global. La nature de la menace de la sécurité environnementale et les interactions complexes qui ont présidé à sa mise en place sont plus susceptibles de paralyser que d'animer les institutions appropriées. Le temps est venu d'analyser ces préoccupations environnementales d'un œil stratégique et d'aborder les priorités par une coopération régionale et une coordination interdisciplinaire. Les efforts de coopération peuvent commencer au ministère de l'Environnement au Canada et être augmentés en faisant de la sécurité environnementale une priorité d'action au prochain Sommet des Amériques qui aura lieu à Québec.

En plaçant la sécurité environnementale au rang des priorités du ministère et du Sommet, les gouvernements peuvent :

- Aborder, par des gestes concrets et mesurables, les préoccupations régionales les plus criantes et les plus coûteuses (sur le plan économique et humain) des dernières années afin d'améliorer la gouvernance environnementale.
- Favoriser la convergence, le perfectionnement et l'harmonisation des aspects critiques des mesures liées au renforcement de la sécurité et de la confiance entre les États du Sommet de Santiago, ainsi que les partenariats de développement durable conclus au Sommet de Miami.
- S'attacher aux problèmes de la sécurité humaine en plaçant la santé, le bien-être et la prospérité des citoyens au centre d'une analyse stratégique, basée sur le risque, des priorités non classiques en matière de sécurité.
- Reconnaître les travaux effectués récemment dans les secteurs de la défense et de l'environnement dans la région et orienter d'autres mesures complémentaires à la lumière des priorités économiques régionales.
- Réagir à l'appel répété des États des Caraïbes de porter une attention particulière à l'importance des questions relatives à l'environnement et aux ressources dans le contexte de la sécurité nationale et régionale, tout en reconnaissant que le problème n'est pas unique au bassin des Caraïbes.
- Assurer des progrès concrets en demandant que soient élaborés des indicateurs spécifiques permettant de mesurer la nature et le degré des problèmes de sécurité environnementale dans la région et la capacité des cadres de gouvernance de réagir à de tels problèmes.

RESUMEN

La seguridad de los países americanos -dígase estabilidad económica, salud y bienestar ciudadanos, y soberanía nacional- se haya cada vez más amenazada por los crecientes desafíos ambientales. Estos desafíos se derivan de estrategias de desarrollo que colocan a las comunidades en una situación de mayor fragilidad ante los desastres naturales, y del impacto negativo a largo plazo que tienen el crecimiento poblacional y determinadas disposiciones sobre el uso de la tierra. Asimismo, son el resultado del manejo inadecuado de los recursos que coloca al ecosistema y a las comunidades en una situación vulnerable. La degradación del medio ambiente también genera patrones migratorios distorsionados tanto internos como entre los países. Las condiciones desfavorables de sanidad y de manejo de los desperdicios industriales debido a la falta de procedimientos y tecnologías apropiadas pueden resultar perjudiciales para la salud humana.

El tema de la seguridad ambiental no es nuevo, pero sí tiene nuevas urgencias. Los desastres naturales ocasionan grandes daños económicos, especialmente en la cuenca del Caribe. Numerosos especialistas concuerdan en que los daños ocasionados por los huracanes Mitch y Georges, y los recientes terremotos ocurridos en El Salvador se debieron realmente a patrones de desarrollo inadecuados y a la mala planificación del uso de la tierra. No obstante, los desafíos sobrepasan los meramente encaminados a paliar los daños que ocasionan los desastres naturales. Existen ejemplos que demuestran que los desastres naturales son solo una arista del problema, como la batalla que se libra en México contra el envenenamiento de menores por las contaminaciones de plomo y el aumento de la incidencia de problemas respiratorios en Santiago de Chile. Todos estos problemas perjudican las posibilidades de desarrollo de las comunidades y de las economías de la región, y la prosperidad que los gobiernos procuran alcanzar para sus pueblos se ve entorpecida cuando los inversionistas temen sufrir pérdidas o daños por motivos ambientales.

A pesar del auge e intensidad que han cobrado las inquietudes, aún se comprende muy poco el nexo que existe entre las políticas ambientales destinadas y la seguridad regional, y generalmente se carece de una visión integral. La amenaza a la seguridad ambiental y las complejas formas en que esta se expresa tiene mayores probabilidades de paralizar que de estimular a las entidades involucradas. Es oportuno analizar estos problemas estratégicamente, y enfrentar las urgencias a través de la cooperación regional y la coordinación multidisciplinaria. El Ministerio de Medio Ambiente de Canadá podría iniciar estos esfuerzos. También sería provechoso priorizar el tema de la seguridad ambiental en la agenda de la próxima Cumbre de las Américas que tendrá lugar en la Ciudad de Québec.

La inclusión del tema de seguridad ambiental como una prioridad al nivel ministerial y de la Cumbre permitiría a los gobiernos:

- Afrontar algunas de las catástrofes regionales más notables y costosas de los últimos años (en términos humanos y económicos) mediante acciones concretas y palpables dirigidas al mejoramiento del manejo del medio ambiente.
- Promover la convergencia, perfeccionamiento y conciliación de los aspectos más importantes de las mediadas de fomento de la confianza y la seguridad entre los estados de la Cumbre de Santiago, y las alianzas para el desarrollo sostenible de la Cumbre de Miami.
- Colocar la salud, el bienestar y la prosperidad de los ciudadanos en el centro de un análisis estratégico de los riesgos que entraña el descuido de las prioridades de seguridad no tradicionales.
- Reconocer los esfuerzos recientes realizados en los sectores de defensa y del medio ambiente en la región y orientar acciones de apoyo acordes con las prioridades económicas del área.
- Responder al continuo llamado de los países caribeños por que se preste atención a las cuestiones relacionadas con el medio ambiente y los recursos naturales como temas de relevancia para la seguridad nacional y regional, sin dejar de advertir que estas preocupaciones no son exclusivas de la cuenca del Caribe.
- Efectuar avances concretos mediante la elaboración de indicadores específicos para medir la naturaleza y la dimensión de los retos que enfrenta la seguridad ambiental en la región y la capacidad de las estructuras pertinentes de dar respuesta a estos retos.

BACKGROUND

Environmental security is a real, immediate and potentially costly concern in the Americas — in both human and economic terms. It is not a new concern, but it has new urgency. It can be illustrated by a few cases in point:

- In October 1998, Hurricane Mitch struck Central America, leaving more than 19,000 dead or missing, an estimated three million displaced, and more than \$5 billion US in economic damage. Honduras' President maintained that the disaster set his country's development back three decades. Mitch affected not only those countries directly in its path, but also neighbouring countries in Central and North America that bore the impact of response costs and changed migration patterns. While the hurricane was a natural event in origin, the magnitude of the devastation can be attributed in large part to development choices and land use patterns that left entire communities on vulnerable hillsides and flood plains.
- In the late 1980s and early 1990s, studies showed that 70% of new-borns in Mexico City had lead levels in their blood well above World Health Organisation standards — with a potentially devastating impact on motor skills and intelligence. Mexico made substantial progress in reducing the threat by eliminating lead in gasoline, yet in the late 1990s, officials were still struggling with lead poisoning linked to lead-glazed cookware and contaminated soil near industrial sites — a struggle that has led to increasing economic and health costs.
- In August 1995, a 2.9 million square meter containment pond at Guyana's Omai Gold mine failed, flushing several billion gallons of cyanide wastewater into the Essequibo River in what government sources described as

“one of the worst mine disasters in history”. The effluent killed aquatic life for more than 150 kilometres downstream and posed a health and economic threat to those whose livelihood comes from the river. Cleanup cost estimates ranged up to US\$50 million (not including the profits lost from shutting down the mine for five months), and Guyana's fish and seafood exports were suspect or outright banned in foreign markets in the region, including the United States, Barbados and Jamaica.

Cases such as these are familiar to policy makers throughout the Americas who can point to similar challenges within their own borders.

They affect every state in the region, and there is a sense that the threat is growing.

The International Red Cross reported that “natural disasters in 1998 created more refugees than wars or other armed conflicts. Declining soil fertility, drought, flooding and deforestation drove 25 million ‘environmental refugees’ from their land and into vulnerable squatter communities of crowded cities”. The Red Cross further reported that environmental refugees represent 58 percent of the total refugee population worldwide.

Environmental concerns also have a well documented economic impact — as a direct cost where resources are scarce or where environmental impacts must be

mitigated, and indirectly as environmental concerns lead to instability that can reduce investor and consumer confidence. In short, environmental security concerns can harm the competitiveness of a state and its business enterprises as well as the prosperity of its citizens.

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and rarely viewed comprehensively. Ironically, if foreign troops or terrorists threatened the same consequences, the response would be more certain. Traditional defence and security frameworks would facilitate action, and the collective resources of the region could more readily be brought to bear. Imagine the response were a foreign agent to poison the children of any city in the region, or taint the fish stock in an entire river. But the nature of the environmental security threat, along with the complex interactions through which it is realised, are more likely to paralyse than animate relevant institutions.

DEFINING ENVIRONMENTAL SECURITY

A meaningful definition of environmental security starts with the concept of state security, which has evolved in the years following the cold war. In the more traditional view, state security is concerned with maintaining territorial integrity and domestic peace. The state and its territorial sovereignty are the point of reference. From a more modern perspective, state security also values the health and well-being of populations, and their economic prosperity. Citizens, and not just territorial sovereignty, become a central concern of the state's security policy.

Under this more modern view, the importance of environmental challenges becomes immediately apparent. It is well documented that environmental stresses have both direct and indirect impacts on populations and economies under a range of circumstances. Human health is directly at risk from practices ranging from poor sanitation to mismanaged industrial wastes, and the injury can extend to casualties in the thousands from even a single source. The economic costs of environmental stress are also enormous as the United States learned, for example, in the 1980s and '90s in cleaning up toxic discharges from decades worth of poor environmental management. The economic toll was in the trillions of dollars to mitigate a problem that most agree could have been avoided through modern practices and

technologies. Much of this was the transaction cost of addressing the problem *after* the fact through the legal system rather than as part of normal business management planning.

This broader view of security is consistent with the interest in "human security" advanced by Canada over the past three years in that it puts citizens, and not just the state, at the centre of national security concerns. Yet environmental security builds on and focuses human security concerns through a strategic, risk-based analysis of non-traditional security priorities. Just as defence analysts target resources at what they discern is the greater threat (in terms of immediacy or magnitude), policy analysts must target resources at the greater threats to populations and economies.

Causes of Environmental Stress

In order to assess risks and set policy priorities, it is important to concentrate on the human element in environmental stress. While natural events such as earthquakes and hurricanes can be anticipated, policy planning can be more effective when it is aimed at human behaviour — arguably more easily targeted by policy makers. Thus even where natural disasters are a concern, event forecasting must be combined with meaningful long-term planning to assure that disasters are mitigated or avoided.

In general, the human-induced, or anthropogenic, causes of environmental stress may be described as they relate to resource claims, resource depletion and resource degradation.

- *Resource claims.* The effort to access natural resources and claims of right to those resources are important historic causes of environmental stress. In the Americas, most cross-border resource disputes are long settled, but concerns still arise in areas such as the Rio San Juan in Central America, or the Canada-Spain fisheries dispute in the mid-1990s. Domestically, many countries can attribute unrest to resource claims — particularly where

land tenure systems are still evolving or rights are recently recognised. Brazil can point to internal conflict, often violent, arising from competing claims to lands by indigenous communities and by mining and timber interests that have more recently arrived and received resource concessions. Nicaragua has faced a range of disputes, again sometimes violent, as it has sought to resolve competing resource claims in its eastern autonomous regions, and a number of countries face increasing economic pressure from efforts to access energy resources.

- *Resource depletion.* Resource depletion leads to increased scarcity that can have destabilising economic or social impacts, particularly where the resources are critical or communities are highly dependent on specific resources. Water scarcity, for example, has become an increasing concern in the Americas and one that will require conservation and innovative technological solutions. Despite substantial advances in drinking water coverage in many countries, the number of people without access to safe drinking water has increased in the last decade — largely as a result of population growth — and the impact on human health and economic productivity is enormous. Food

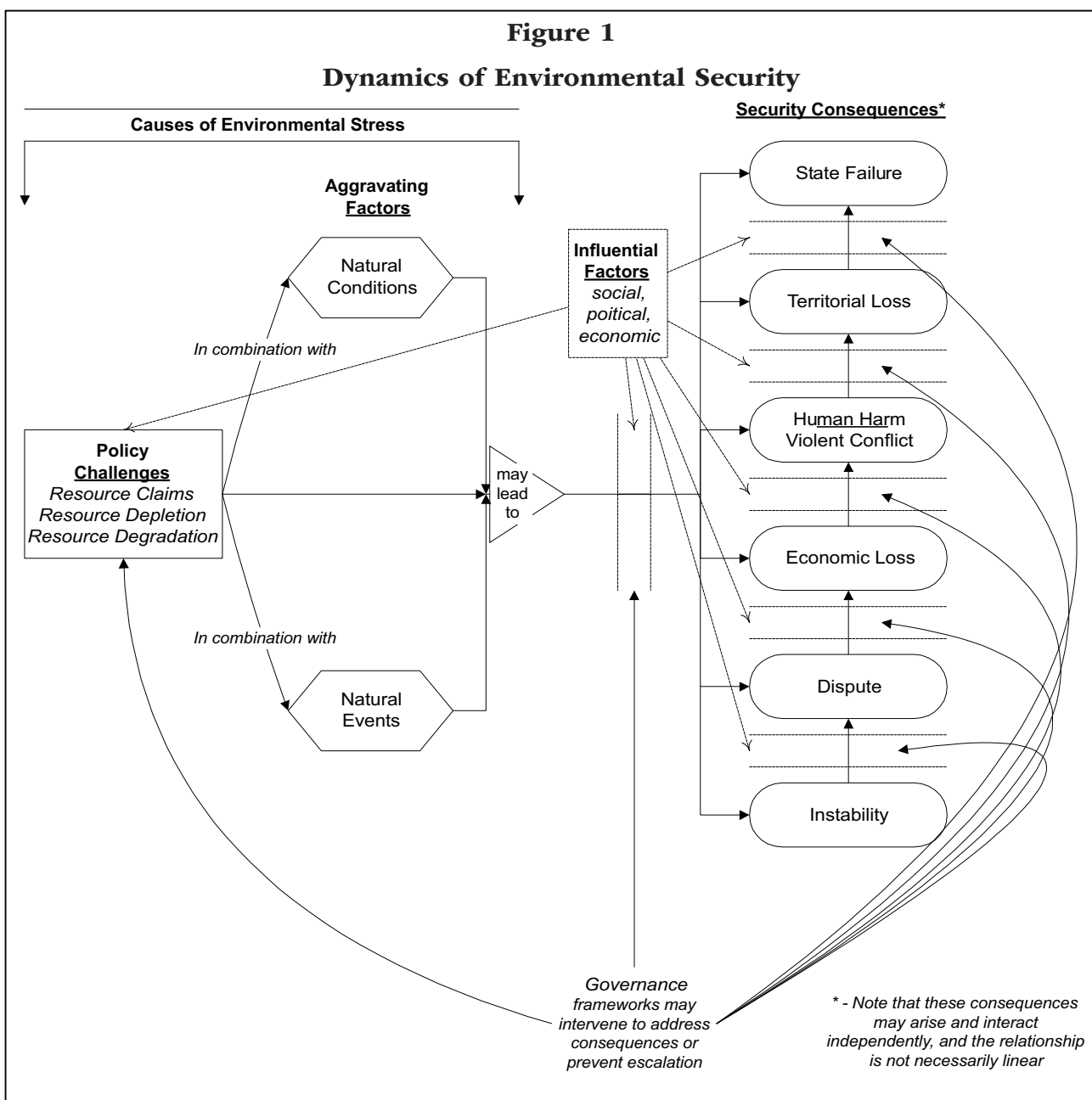
scarcity also takes a toll on health and productivity in the region, and in some cases open conflict has arisen over increasingly scarce food resources. Caribbean states, for example, can attest to the human and economic dimension of depleted fisheries. Those states with tropical forests have likewise witnessed populations that migrate in rhythm to the depletion and destruction of forest resources. The slash and burn farming that plagues the region depletes soil nutrients — largely through the practice of burning itself — and minimises the productivity of arable land. Developed countries are not immune to this phenomenon, as the United States has recognised in its renewed debate over pursuing fossil fuel in protected areas because scarce supplies have driven prices up. Where resource depletion becomes extreme, drought and famine may result — with devastating impacts on life as well as territorial integrity.

- *Resource degradation.* Human activity can degrade the environment through the introduction of contaminants, the destruction and dislocation of species, and the destruction of habitat. Of the three categories of environmental security concerns, this is the

Chart 1	
Summary of Human-Induced Environmental Stressors	
Causal Factor	Description
<i>Resource Claims</i>	Claims of right to (or efforts to access) territory or resources through interstate border claims through the operation of informal or formal systems (such as land tenure rules), or the denial of access through economic or social structures that place resources beyond the capacity of specific individuals or populations.
<i>Resource Depletion</i>	The reduction of available resources through agricultural, industrial or domestic activity leading to increased scarcity of resources or commodities (including food and water), or in extreme cases to the utter destruction of resources.
<i>Resource Degradation</i>	The degradation of resources through agricultural, industrial or domestic activity leading to direct or indirect human health threat or ecosystem stress (such as the discharge of untreated human or industrial waste to air, water or terrestrial systems).
Note that any of these three causal factors can be gradual or acute, and can be aggravated by natural conditions and/or events, as well as by social, economic and political effects.	

one that arises most from modern practices, and thus presents the most unique set of challenges for traditional security analysts. It also has the most potential for solution from modern technologies and sound environmental management practices. To some extent, degradation is a by-product of industrial development that is an important regional goal, and urban residents from Santiago de Chile to New York have suffered the ill effects of air pollution, congestion and domestic waste concerns. Rural communities face distinct challenges from the introduction of agricultural chemicals into the environment and the limited availability of sanitation services, yet they are

increasingly threatened by industrial activity, as the cyanide release in Guyana's Essequibo River attests. In many cases, the impact of resource degradation is direct, as these examples suggest, and the cost in human health and economic terms is high. But degradation can lead indirectly to harm where natural conditions or events intervene. For example, poor agricultural practices degraded hillsides in Honduras leading to siltation problems that plagued its principal hydroelectric dam in the 1990s, with negative repercussions for the population and the economy.



Environmental Security Dynamics

The link between human activity, environmental stress and security is complex, and the dynamics of the inter-relationship are difficult to describe.

Figure 1 represents one way of thinking about the interaction of human activity (anthropogenic causes) and natural events or conditions as “environmental stressors” within an economic, social and political context.

Under this model, anthropogenic causes act directly or in combination with specific natural conditions or events to threaten security through a range of consequences. These direct consequences may also escalate or interact — driven by social, political or economic factors — often in a non-linear fashion. One could describe economic consequences ranging from loss of arable land to reduced worker productivity or increased health care costs. While the model above does not detail these threats, they are contemplated in the reference to economic cost.

The model shows that governance frameworks (policies, laws and institutions) may intervene within the broader economic, political and social context to minimise the cause, avoid the consequence, or prevent escalation. The magnitude of any specific security threat depends on the ability of frameworks to respond, and states with adequate frameworks are more likely to recognise environmental stresses and minimise their impact.

ENVIRONMENTAL SECURITY IN THE WESTERN HEMISPHERE

Environmental security concerns are particularly relevant in the Americas where economies are dependent on natural resources and there is a large urban population. Resource-based economies are vulnerable to environmental security threats because economic stability and

livelihood depend upon rational and consistent access to the resources that drive economic growth. Antiquated or inadequate systems of land tenure or allocation and activities that deplete or degrade natural resources can threaten that stability. Urban populations are susceptible to the negative health impacts of environmental degradation, such as air pollution and the presence of industrial contaminants in water and soil, and settlement patterns may put some communities at particular risk from ambient contamination levels or adverse natural events.

A number of national constitutions in the region guarantee a right to a clean, safe and/or healthful environment. While the language varies, this fundamental recognition of environmental rights clearly places human populations and their relation to the environment at the centre of the state’s understanding of national security.

The Summit of the Americas Record

Summits have recognised the basic principles underlying environmental security, but to date its treatment as a clear regional priority has been somewhat peripheral and ill defined. The Plan of Action from the First Summit of the Americas in Miami (1994), created partnerships for sustainable development — a closely related goal with important security implications — but did not bring environmental security concerns into clear focus. The 1996 Summit on Sustainable Development, held in Santa Cruz, Bolivia, spoke to broader themes of sustainability that again echoed security concerns, and the Santa Cruz Declaration acknowledged that “the benefits of prosperity will only be attained through policies that address the interrelationship between human beings and nature”. Again, security was not specifically addressed as a means to manage this inter-relationship and assure prosperity.

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The Second Summit of the Americas in Santiago, Chile (1998) addressed confidence building and security as a specific theme. While environmental security was not addressed in detail, the Santiago Plan of Action recognised the need to take into account “the new political, economic, social and strategic-military factors in the Hemisphere and its sub-regions,” and the “special security concerns” of small-island states, including “economic, financial and environmental matters . . .” The Santiago Plan of Action called upon the Organization of American States (OAS) Committee on Hemispheric Security (CHS) to “follow up and expand topics relating to confidence and security building measures,” and to “pinpoint ways to revitalise and strengthen the institutions of the Inter-American System related to the various aspects of Hemispheric Security.” It further called for a “Special Conference on Security, within the framework of the OAS” to be held at the beginning of the new decade.

Summit Follow-up to Date

In response to Santiago, OAS/CHS has begun to evaluate new and non-traditional threats, and participants in its March 2000 meeting called for attention to environmental and natural resource issues. The Chair reported “considerable agreement” that modern security problems for American states no longer “come from eventual external military threats.” (Special Meeting of The Committee on Hemispheric Security to Continue Developing the Most Appropriate Common Approaches With Which to Manage the Various Aspects of International Security in the Hemisphere, March 20-21, 2000 (March 2000 CHS Meeting) Report Of The Chair). Instead, there was near unanimous agreement on the need to reformulate the concept of security in the hemisphere — and the “need to recognise the close links between security, development

and the consolidation of democracy . . .” (March 2000 CHS Meeting Conference Report).

The small island states in the Caribbean in particular have recognised the link between environmental conditions and the security of their populations, perhaps because they are subject to the more immediate influence of natural cycles. At an April 2000 Hemispheric Security Committee meeting, a draft resolution prepared by the Chair acknowledged natural disaster threats to small island states and recognised the need for “protection against ecological disasters and environmental threats to their viability . . .” (Meeting on Co-operation for Security in the Hemisphere, Draft Resolution prepared by the Chair, OAS Committee on Hemispheric Security 20 April 2000, Permanent Council of the OAS (CP/CSH-289/00)).

While the Caribbean states appear to be furthest along in voicing concern over environmental security, their challenge is not unique. Many states share the ecological vulnerability of the Caribbean, and no immunity to environmental security challenges is conferred by virtue of size or economic progress.

At the same time, acting under broader mandates for sustainable development, environment experts have begun to assess the security implications of resource degradation and depletion where it threatens human health and economic prosperity, and to understand the role of good governance in addressing these challenges. This early dialogue has included projects of the OAS Unit for Sustainable Development and Environment (OAS/USDE) such

as the Inter-American Forum on Environmental Law (FIDA), and the work of the OAS Inter-American Committee on Natural Disaster Reduction (OAS/IACNDR).

Yet the analysis and dialogue to date has largely been separate and insulated, and there is no sustained effort to review and respond to the issues raised. While the Caribbean states appear to be furthest along in voicing concern over environmental security, their challenge is not

unique. Many states share the ecological vulnerability of the Caribbean, and no immunity to environmental security challenges is conferred by virtue of size or economic progress. Strong political and economic systems can help absorb the impact of environmental stress, but even countries with the strongest economies need to minimise the cost of environmental stress.

The Free Trade Area of the Americas

Attention to environmental security can help advance another important regional priority — establishing a Free Trade Area of the Americas. Sound environmental policies will serve to protect the resource base for much of that trade, promote investor confidence in legal and political systems that manage environmental risk, and advance more competitive businesses by encouraging efficiency and waste minimisation. By recognising that environmental policies are linked to economic growth and prosperity, they can be addressed in more strategic terms.

By eliminating or mitigating stresses of resource depletion and degradation, environmental policies can promote the long-term economic viability of resource-based trade and provide a strategic basis for balancing export-based growth with long-term conservation. As trade fuels growth and adjustments within critical sectors, the scarcity of some commodities may threaten domestic availability or cause supply to fluctuate in a manner inconsistent with market demands. Viewing natural resources as strategic commodities will promote policies that minimise these effects and protect domestic consumers even as trade expands.

Moreover, both foreign and domestic capital is more likely to be invested in systems with sound legal and institutional infrastructures that can minimise risk and mitigate environmental consequences before they threaten health and economic stability. Left unchecked, environmental risk can reduce capital flows in the Americas because investors fear liability associated with environmental events, question the ability of

institutions to implement standards fairly and effectively, or doubt the productivity of populations affected by environmental health problems.

Finally, sound environmental policy can be seen to promote basic business efficiency. Businesses that produce more units of a finished product with fewer raw materials and less environmental waste will have a natural competitive advantage over those with outmoded technologies and environmental management practices — as those embracing clean production practices have recognised. Export-oriented businesses will find themselves more competitive in global markets where they can produce goods efficiently and consistent with international standards. In addition, increasingly sophisticated consumers will make demands for environmentally sound products and production methods even where government regulations do not. Thus, viewing environmental concerns strategically can have positive implications for economies as well as minimising negative implications.

In sum, those hoping to prosper from the infrastructure envisioned for the FTAA will benefit substantially by viewing environmental concerns from a strategic standpoint and recognising that adequate environmental policies can lead to a more secure and sustainable trading system.

POLICY CHALLENGES

Any effort to address environmental security in the Americas will face certain conceptual and political challenges that should be faced to assure progress both regionally and domestically.

Sustainability, Prosperity and Environmental Security

The first challenge of addressing environmental security concerns is to understand the link between sustainability, prosperity and environmental security. These are not independent or collateral goals, but must be

viewed integrally. Prosperity cannot be sustained, or broadly attained, where economic stability and the well-being of populations cannot be assured. Environmental security should be seen as a baseline for prosperity because it focuses on protecting the health and well-being of populations and the stability of resource-based economies. It is the modern city wall within which populations may trade, grow and prosper. Without it, growth and prosperity will be challenged by every passing threat. Focusing on environmental security allows a pragmatic and strategic approach to building this protective wall. It does not seek decisions based on competing abstract ideals, but instead takes an approach to assessing development choices through a quantitative, risk-based analysis.

At the Miami Summit in 1994, sustainable development partnerships were formed to promote long-term benefits in the context of economic growth and integration. The idea of sustainability has remained an important theme, both as the subject of the Summit of the Americas for Sustainable Development in Santa Cruz in 1996 and as a touchstone at the Santiago Summit in 1998. As we approach Quebec City in 2001, Summit planners have focused on prosperity as one unifying theme that embraces aspirations for sound and equitable economic integration. In essence, environmental security is at the core of sustainability and prosperity because it creates a basis for securing human health, economic stability and resource conservation in the most fundamental terms.

Disparate Institutions and Bureaucratic Competence

A second challenge in addressing environmental security concerns is that institutions dealing with

the environment have rarely interacted, much less been integrated, with those dealing with security. The 1990s saw some governments beginning to think of environmental issues in strategic security terms, but these early efforts have not yielded any wide-ranging inter-agency process, nor have they had much impact on policies aimed at the causal issues of environmental security (either domestically or in international development policy). Although these initial efforts should be credited, experience to date suggests that more deliberate inter-agency dialogue and planning are needed to promote progress in any state.

Co-ordination will be critical, and decisions will be faced about which institutions are best suited to manage environmental security concerns. This challenge will ultimately be met by states on the basis of their national priorities and traditions, but a careful analysis of environmental security concerns will help to discern and co-ordinate the proper role of agencies that have not been traditional partners. Some thought might also be given to reorganising relevant institutions and establishing new priorities based on a strategic re-evaluation of strategic national interests. In some countries, the ability of institutions as presently constituted to address strategic environmental security concerns may be deemed too limited.

At the regional level, Environment Ministers have not yet established an effective forum for co-operation and mutual support. While the United Nations Environment Programme Regional Office for Latin America and the Caribbean (UNEP/ROLAC) convenes annual meetings of Environment Ministers, these forums have to date suffered from two important debilities. First, they relegate the United States and Canada, as well as the Organisation of American States, to

Environmental security is at the core of sustainability and prosperity because it creates a basis for securing human health, economic stability and resource conservation in the most fundamental terms.

observer status and thus cannot become truly regional co-operation vehicles. Second, the agenda is driven by UNEP's mandate, which is critical, but hardly comprehensive in its treatment of the environmental and natural resource concerns facing the region. Canada has invited Environment Ministers to a regional meeting prior to the Quebec Summit, and this is a good start. Hopefully, it will lay the foundation for future open, inclusive and comprehensive dialogue aimed at strategic environmental concerns in the region.

Beyond collaboration among Environment Ministers, there is also a need for inter-disciplinary co-operation and mutual planning among environment and economic development institutions and those that are defence or security oriented. At the very least, a constructive dialogue aimed at analysing the nature of environmental security challenges in the region and promoting action within the competence of relevant institutions — both political and technical — would likely prove beneficial.

The Governance Response

As the dynamic model at Figure 1 suggests, governance frameworks form part of the context within which causal factors arise and lead to the range of possible consequences. But they are more than just contextual — they are also potential management tools. These frameworks can be deliberately conceived and brought to bear to assess, avert, or eliminate environmental stress and conflict, and thus reduce security threats.

National and local environment authorities have a particularly important role in dealing with environmental security concerns, as they are the stewards of policy and legal frameworks that promote sound environmental management, protection and conservation. They may be in the best position (working with relevant sectoral ministries) to minimise environmental stresses, and to intervene even after stress has led to some

degree of instability by preventing escalation to higher-order conflict and human harm. While some level of conflict is inevitable, environment authorities, in conjunction with national judicial systems, can offer a conflict resolution process to defuse threats of instability and minimise further environmental or economic harm.

Governance frameworks should also create a basis for affected and interested parties to become engaged in the process of making and implementing policies relating to the environment. Prior Summits have called for increased public participation as a fundamental means of promoting sustainable development, and that principle may also be critical in minimising security concerns. At a domestic level, public participation can help shape policies to address resource claims, and to avoid degradation and scarcity. Citizens groups can serve an important role in monitoring resource availability and providing early warning of potential scarcity. They can also monitor compliance with applicable norms designed to minimise environmental degradation, and may even be given the right to seek redress where the rules have been violated. Participatory compliance and dispute resolution systems provide a socially-acceptable way to minimise environmental harm and to manage conflict even where some dispute is inevitable.

RECOMMENDATIONS FOR ACTION

Environmental security concerns warrant the attention of policy makers at the regional and domestic level throughout the Americas. National and local governments, as well as regional institutions, have a role in managing environmental issues and addressing concerns of resource access, depletion and degradation. While the link between environmental stresses and security may be complex, and the search for appropriate responses may be analytically challenging, the time has come to embrace the challenge.

At a national and local level, a more strategic vision of environmental issues is needed.

- Governments should continue to deepen their understanding of the connections between environmental stress and security in their own economic, social and cultural context. Efforts should be made to clarify land tenure rules consistent with national interests as a means to minimise disputes over claims for resource access.
- Institutions and frameworks should be enhanced for sound environmental management, with a particular emphasis on strengthening the role and capacity of environment authorities — both dedicated environmental ministries and appropriate sectoral ministries. These are the institutions with the most relevant technical capacity to minimise resource degradation and depletion. The role of these institutions should be clarified, both among national sectoral authorities and between national and sub-national governments, to assure that security concerns are addressed and minimised at the most appropriate level in a given national context.
- Steps should also be taken to strengthen environmental dispute resolution systems as a means to resolve disputes equitably when they do arise. Parties affected by or interested in a dispute should have standing to participate in an equitable, state-sanctioned resolution mechanism rather than being left to address their concerns outside of the law, and in a potentially more destructive manner.

At a regional level, further study, dialogue and co-operative effort is called for.

- A meaningful evaluation of environmental security concerns as a governance priority can

serve to integrate the broader community of relevant experts from environmental and economic disciplines. These may include the OAS/CHS, the OAS/USDE, the Inter-American Committee on Sustainable Development (OAS/CIDS), the Inter-American Forum on Environmental Law (OAS/FIDA), the Inter-American Committee on Natural Disaster Reduction (IACNDR), the Inter-American Water Resources Network (IWRN), the Inter-American Defence Board (IADB), the Inter-American Juridical Committee (IJC), the Inter-American Development Bank (IDB), the World Bank and the Pan American Health Organisation (PAHO).

Relevant expert institutions, donor institutions and non-governmental counter-parts should also be included in any ongoing dialogue.

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- The upcoming meeting of Environment Ministers in Canada on March 29-30, 2001 may be an important opportunity to consider environmental concerns in the context of domestic and regional security. Participants in this meeting could lay a foundation for further expert dialogue and mutual support with a view to integrating their efforts with those of other relevant sectors in the future. They can also

focus on mutually supportive measures to build the capacity and strengthen environment and sustainable development ministries in the region.

- As a further concrete step, addressing environmental security as a Quebec City Summit action item would acknowledge the issue as a regional priority, provide guidance to the disparate communities struggling with environmental security concerns, and assure that future action takes an interdisciplinary and collaborative approach leading to practical and measurable results.

The Quebec City Summit Plan of Action could:

1. Recognise environmental security as a regional priority because of the strong linkages between the challenge of creating economic prosperity and the challenge of addressing resource claims, depletion and degradation concerns.
2. Call for a high level inter-disciplinary dialogue with a view to creating mechanisms for evaluating and monitoring environmental security risks (particularly their potential impact on economic prosperity) and establishing priorities for future action through meaningful environmental security indicators; and
3. Promote the strengthening of institutions and frameworks for environmental governance to meet a growing range of environmental challenges that can imperil the health and well-being of citizens, impede or disrupt economic prosperity, and threaten regional and domestic stability.

This action item would facilitate interdisciplinary dialogue while assuring concrete and measurable outcomes.

CONCLUSION

While prior Summits have spoken to concerns of sustainability in development, environmental protection, and regional security, no clear call has been made to link these issues in a way that will promote meaningful risk assessment, economic analysis and strategic planning. The time has come to make this priority clear, and to outline concrete actions to promote environmental security in the region that can lead to measurable results.

The process should most likely begin, as any complex interdisciplinary concern, with an open dialogue among relevant parties who are called upon to analyse the problem and make specific recommendations for action. An important

challenge for participants in any such dialogue will be to seek a deeper understanding of environmental security as it affects the lives and welfare of communities in the Americas. It will be critical to define indicators of environmental security and begin the process of measuring anthropogenic environmental stressors. It will also be critical to begin assessing the strength of governance frameworks and the capacity of governance institutions to intervene and prevent or mitigate the consequences of environmental stress.

Government officials and experts preparing for the next Summit of the Americas in Quebec City may wish to give particular attention to the issue of environmental security, and to place it on the agenda as an area for further analysis and co-operative effort. One of the founding principles of the inter-American system is mutual support and defence. The increasing challenges to the region's environmental security certainly call for an application of this principle.

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