IV. Overview and Conclusions
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1. How Governments Approach the Concept of Environmental Security

The Evolution of the Concept of Comprehensive Security

The connection between environment, security, and development was first highlighted by the late Swedish Prime Minister Olof Palme at the United Nations Commission on Disarmament and Security. Palme called on member states to redefine security by encompassing both collective security (the traditional and military concept of security) and common security, which reflected a broader concept of security that included economic change, environmental degradation and environmental scarcity among the causal factors. The concept of common security has evolved into what most governments now refer to as comprehensive security.

The Influence of the UN High-Level Panel on Threats, Challenges and Change

One of the most important intergovernmental processes that has shaped the way in which governments approach environmental security is the 2004 report of the United Nations Secretary-General's High-Level Panel on Threats, Challenges, and Change. Endorsed by many governments at the recent 2005 Millennium Review Summit, the High-Level Panel sets out a new vision of collective security that addresses six clusters of threats with which the world must be concerned now and in coming decades. These include:

- War between States
- Violence within States
- Poverty, infectious disease and environmental degradation
- Nuclear, radiological, chemical, and biological weapons
- Terrorism
- Trans-national organised crime

The Panel maintains that these cluster of threats to human security do not recognise national boundaries, and that in light of their intrinsic inter-connections, they must be addressed at the global, regional and national levels.

As regards the environmental security dimension of the new threat landscape, the High-Level Panel's report highlights the fact that 90% of current conflicts are found in the poorest 30% of countries and that it is the poorest countries that face the greatest environmental challenges. The report also affirms that environmental concerns are rarely factored into security, development, or humanitarian strategies. As a result, the Panel maintains that decision-making continues to be fragmented at all scales of governance.

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This is particularly evident in the disjointed way that national governments have organised themselves to address what are no longer stand-alone threats, but closely interrelated phenomena. Indeed, the environmental dimension of security was reiterated in the UN Secretary-General's report for the 2005 World Summit. The Secretary-General explicitly linked success in achieving human development and security with the sustainable use of natural resources.

OECD Government Approaches to Environmental Security

For many OECD governments, the concept of comprehensive security includes not only issues of military security, but also factors that relate specifically to the security of humans and the health of their environments. The dichotomy that characterises conventional versus comprehensive approaches to security is paralleled by the distinction often made between hard and soft power, with hard power denoting military force and the latter representing tools such as trade, aid and other instruments of diplomacy to achieve political goals.

Security goals increasingly relate not just to arms control and disarmament, but are accompanied as well by peace-building and the development of human and ecological security.

The following examples illustrate how and to what extent selected OECD governments have approached the linkages between environment and security:

- Finland's Security and Defence Policy of 2004 recognises the interlinkages between environment and security in terms of the extent to which resource scarcity and degradation, along with unequal access, have increased the likelihood of conflict.

- The UK's FCO Sustainable Development Strategy of 2005 asserts that sustainable development is critical to world peace and security; threats to security will continue to thrive where there is poverty and mismanagement of natural resources.

- Germany has a strong tradition in the policy areas of environment, development and peace. Rooted in the strong relationship between the peace movement and the green or environmental movement, the (nuclear) disarmament policy debate has traditionally been linked to environmental issues.

- Canada's Defence Policy realizes the reciprocal impact foreign and domestic policy have on environmental security; it focuses on analysis and preventive efforts in the structuring of new approaches, instruments, and institutional roles and responsibilities to maintain peace and security.

- Swedish SIDA asserts the causal link between conflict and poor environmental security, noting the specific interrelationship between poverty, good governance, environmental destruction, human health, and economic growth. SIDA maintains that for policy to effectively maintain environmental security, it must provide the conditions necessary for sustainable livelihoods.

- The Austrian Security Strategy targets the "hard threat", military aspects of environmental security, while also realizing the increasingly importance "soft threats", such an economic stability and human rights. This comprehensive strategy realizes the integral roles these two areas play in maintaining peace and stability when implementing foreign policy.

- The International Security Section of the Swiss Federal Agency for Foreign Affairs acknowledges that the relationship between environment and security is multi-

dimensional. Any attempt to define the relationship must take into account this complexity and that this multi-dimensional relationship calls for a broadening of the conventional understanding of security.

- The Norwegian Environment Ministry directs its efforts as a matter of first priority to long-term economic, political, and human rights development rather than focusing on the use of military force in environmental security policy. Norway maintains that increasing stability in regional conflicts directly contributes to the enhancement of the security of the global environment.[2]

Key lessons learned in dealing with the new security threats

A few key lessons can already be distilled from the afore-mentioned approaches that governments have undertaken to deal with the changing threat scenario:

- First, it is important to ensure that a whole range of instruments, structures, and expertise at all scales of governance are made available to manage the new generation of security threats. The role of local governments, civil society and the private sector is especially important. Partnerships on the ground between the key stakeholders, as well as donor governments and other international donor agencies must be strengthened and properly resourced.

- Second, more efforts must be directed towards improving the basic understanding of these new and emerging security threats, building up expertise and capacity to analyse the problems and potential crisis areas.

- Third, governments must be more discerning in their choice of policy tools when confronting conflict scenarios. It is commonly accepted that a judicious mix of both hard and soft tools must be used, depending on the conflict scenario.

- Fourth, political will must be mobilised at an early stage in order to enhance prevention of armed conflicts, as well as the detection of and response to natural disasters at an early stage.

- Fifth, international crisis management efforts must be improved. This will require improved cooperation in the field between civilians and military actors, as well as a smoother transition from peace-support to peace-building operations, from emergency crisis-management to long-term post-conflict reconstruction. Here, the EU's experience in coordinating civilian and military operations is instructive for OECD Member States.

2. How Governments Mainstream Environmental Security into Foreign Policy

Environmental Security gaining Currency in Foreign Policy

In recent years, the concept of environmental security has gained currency in the foreign policy making of many OECD governments. As former Canadian Minister of Foreign Affairs Lloyd Axworthy stated in 1998 as borders become increasingly porous, and, foreign policy practitioners deal increasingly with issues directly affecting the lives of individuals: crime, drugs, terrorism, pollution, human rights abuses, epidemics…" [3] Seven

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[2] Store, Jonas Gahr. "Norwegian foreign policy priorities". 26 Oct 2005: London". Arkiv. 10 Jan 2006. <http://www.odin.dep.no/ud/norsk/aktuelt/taler/minister_a/ 032171-090437/dok-bn.html>.

[3] Axworthy, Lloyd. "US urged to bolster support for UN: Human security, and the international criminal court". Canadian Speeches 12, June 1998. Pages 8-12.

years later, Foreign Affairs Canada's 2006 Sustainable Development Strategy formally recognises the role that resource scarcity and the breakdown of ecological systems plays in destabilising regional and global peace and security.

The Implications of Mainstreaming Environmental Security into Foreign Policy-making

Addressing environmental security concerns in foreign policy has enabled States to consider more fully the global problems and the so-called non-traditional threats, which have been caused by increasing levels of interdependence. The scientific community's increased understanding of the trans-boundary nature and impact of environmental change has catalysed an increased appreciation of the role that environmental security plays in achieving political and economic stability around the world.

Examples of the Changed Foreign Policy Discourse

The implications of the above-noted conceptual shift have yet to manifest fully in actual foreign policy making, but the language is changing. For example:

- Finland currently affirms the commitment to comprehensive security in its 2005 Strategy for the Finnish Ministry for Foreign Affairs and to reorienting foreign policy agendas to address new threats arising from environmental disasters and degradation.

- The UK formally recognises sustainable development as one of the six thematic areas that the FCO's Global Opportunities Fund has prioritised. It is also stepping up its efforts to support failing states to manage their environmental problems.

- Canada's foreign policy goals explicitly call for deepened understanding of the interaction among the social, economic, and environmental pillars of sustainable development.[4]

- The Netherlands' 2006 Foreign Policy Agenda specifically acknowledges the role that environmental degradation plays in threatening global security. One of the eight goals of Dutch foreign policy is to protect and improve the environment.[5]

- Sweden's Statement of Government Policy in the Parliamentary Debate on Foreign Affairs asserts that its foreign policy is based on the conviction that there is an "interconnection between security, development and human rights".[6]

- And finally, where states once measured foreign policy decisions against broader strategies of containment, there is a growing recognition that the merit of foreign policy decisions will have to be measured increasingly on the basis of how they address the environmental security imperative.

[4] "Goal 4". 27 Jul 2002. Foreign Affairs Canada. 10 Jan 2006. <http://www.dfait-maeci.gc.ca/sustain/ atenda2003/goal4.en.asp>.
[5] "Policy Agenda 2006". Netherlands Ministry of Foreign Affairs. 2006. Minbuza. 9 Jan 2006. <http://www.minbuza.nl>.
[6] "Statement of Government Policy in the Parliamentary Debate on Foreign Affairs". Government Offices of Sweden. 15 Feb 2006. Government Offices of Sweden. 8 Mar 2006. <http://www.sweden.gov.se/sb/d/3103>.

3. How Governments Mainstream Environmental Security into Development Cooperation

The Growing Recognition of the Development, Environment, and Conflict Nexus

The growing understanding in recent years of the links between conflict, peace, poverty, and the environment has sharpened the focus of donor governments on the role that development assistance can play in both ameliorating but also exacerbating the root causes of violent conflict.

In recognition of the limited effectiveness that traditional foreign policy instruments have had in dealing with environmental conflict, many donor governments, multilateral institutions, and NGOs have increasingly addressed conflict prevention in development assessment instruments. Specifically, they have begun to integrate conflict prevention objectives into aid programming including such approaches as peace and conflict impact assessment tools, the establishment of early warning units, post-conflict recovery capacity, and the development of conflict prevention networks.[7]

The Importance of the OECD Guidelines on Conflict Prevention

An important factor in this changed approach has been the work of the OECD on mainstreaming conflict prevention in development cooperation. Indeed, most donor governments now base their development cooperation in the area of conflict prevention on the 1997 and 2001 OECD Guidelines on conflict prevention. The 1997 OECD/DAC Guidelines on "Conflict, Peace and Development Cooperation stress that strengthening capacity to prevent conflict must be a foundation for sustainable development and that development cooperation should play a role in conflict prevention and peace-building.

The 1997 Guidelines also introduced peace-building as a concept that includes both long-term preventive activities before, during, and after conflict and which calls for the implementation of development assistance as the third pillar for attaining peace (along with the military and political pillars). Four years later, in response to growing concern regarding the potential conflict-related implications of development assistance, in 2001 the OECD/DAC published the DAC Guidelines "Helping Prevent Violent Conflict", which not only stressed the importance of mainstreaming a "conflict prevention lense" into development assistance, but also highlighted the importance of advancing a "culture of conflict prevention" and the role of conflict prevention as an essential means for poverty reduction.

OECD Recommendations for Strengthening Conflict-sensitive Development Cooperation

A number of policy recommendations for strengthening the link between conflict and development cooperation policy have been highlighted in a 2005 OECD/DAC issues paper entitled "Overview of the Links between the Environment, Conflict and Peace" peace. These include the following[8]:

- Engage and address the specific needs of the most vulnerable communities (i.e. traditional resource users who rely on ecosystems for their livelihoods), especially in relation to the management of and access to natural resources;

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[7] Gaigals, Cynthia and Manueal Leonha. "Conflict-Sensitive Approaches to Development: A Review of Practice" International Development Research Centre 2001. Page 6.
[8] OECD/DAC. "Overview of the links between environment, conflict and peace". Issues brief prepared by the OECD/DAC, 2005. See: <www.oecd.org/dac/conflict/issuesbriefs>.

- Promote a regional approach to issues related to natural resources and conflict;

- Address the impacts of the HIV/AIDS pandemic on local tensions, livelihood productivity and resource degradation;

- Help establish and strengthen state and non-state institutions and mechanisms to regulate natural resource use, to arbitrate related disputes, ensure compliance and prevent corruption;

- Provide assistance to protect and improve livelihoods in conflict-prone and conflict-affected regions (i.e. by supporting the development of equitable and effective land administration systems, especially as regards security of land tenure for both women and men, and by supporting the mitigation of environmental resource degradation and the fostering of economic diversification.

Government Approaches to Conflict-sensitive Development Cooperation

The following outlines the range of approaches that donor governments have undertaken to streamline conflict concerns into development cooperation:

- Canada's International Development Agency (CIDA) has established a peace-building unit and has developed a range of activities related to conflict prevention, conflict reconciliation, and dialogue promotion in its aid programming. CIDA has also undertaken an evaluation of the Canadian Peace-building fund in terms of the impact of its development assistance in preventing conflict and building peace. Specific focus has been directed to assessing relevance, appropriateness, cost-effectiveness, and sustainability.

- The German Federal Ministry for Economic Cooperation and Development (BMZ) has started to examine the root causes of conflict and has developed approaches for encouraging non-violent conflict management. It has also undertaken efforts to mainstream crisis prevention into aid programming, and has identified select countries to test case conflict-prevention into aid programming.

- The Japan International Cooperation Agency (JICA) has set up a planning and evaluation department that has undertaken the challenge of integrating conflict prevention and post-conflict reconstruction into development programming and which provides emergency relief during and after conflict.

- The Netherlands has established a Conflict Management and Humanitarian Aid Department (DCH) within the Ministry of Foreign Affairs. This body has been responsible for developing an integrated strategy that incorporates development cooperation, political mediation, emergency relief, sanctions, and military operations.

- Norway has engaged in peace-building missions in over 22 countries and has actively developed a comprehensive, integrated approach to humanitarian assistance, peace, and reconciliation.[9]

- Sweden's SIDA has several departments responsible for conflict prevention and peace-building. Their activities include identifying structural risk factors, reviewing development cooperation, and actively strengthening and promoting Sweden's capacity for conflict prevention.

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[9] "Goals of Norwegian Development Cooperation". 21 Jun 2004. Norad. 10 Jan 2006. Norad. <http://www.norad.no/default.asp?V_ITEM_ID=1284>.

- Switzerland' Agency for Development Cooperation and its Department of Foreign Affairs have been promoting conflict-sensitive development cooperation and have focused efforts in large part on early warning through the development of the Peacenet FAST early warning system.

- The UK's Department for International Development has established a conflict and humanitarian aid department, which aims at improving conflict analysis capacity in cooperation programmes and developing conflict impact assessment. In addition, the Ministerial Group on Conflict Prevention (Ministers from FCO, the Treasury, DFID, Defence) has developed collective efforts in support of security sector reform and in complementing the efforts undertaken by DFID in its conflict-sensitive development cooperation.

- The USAID's Department for Conflict Prevention and Peace-building has focused its efforts on strengthening state capacity to deal with threats, promote self-reliance, establish good governance regimes, engage multiple actors, assist border discussions, and demarcate those borders that may be in serious dispute. USAID has also initiated a project using a conflict lense in designated hot spots. This approach includes an analysis of the environmental stress and conflict, which may have to be considered in aid programming.

- Japan has adopted an active stance in promoting human security in both its bilateral and multilateral development activities.

- Similarly, the World Bank has responded to the complexity of the links between conflict and development programming and as a result the Bank has developed a grading system for assessing projects, which may negatively impact on countries that are conflict-prone.

- As well, the European Commission's DG Development has developed methodologies for integrating conflict-sensitive approaches into its aid programming, especially through the Country Strategy Papers.

4. How Governments Engage in Environmental Cooperation

The UN High-Level Panel on Threats, Challenges and Change and the Call for Strengthened Collective Security

The United Nations High-Level Panel on Threats, Challenges and Change in their 2004 report concluded that the new generation of global threats, which extend from poverty, infectious disease, and environmental degradation to war and violence within states, as well as the spread of weapons of mass destruction, terrorism, and trans-national organised crime requires a new and broader understanding of collective security between nations and the peoples of the world. The Panel's report asserts that the new generation of global threats recognises no national boundary, and therefore no State, no matter how powerful, can by its own efforts alone protect itself from these threats. Every State requires the cooperation of other States to make itself secure.

The EU's Continuing Commitment to Multilateralism

In a recent informal plenary session of the UN General Assembly to continue the exchange of views on the recommendations contained in the High-Level Panel's report, the Austrian Presidency of the European Union asserted that a strong commitment to cooperation and multilateralism was indeed a core objective of the European Security Strategy and that the EU shared the Panel's analysis that the new threats and challenges can only be dealt with in a collective approach. The EU suggests that strengthened

collective approaches must be multilayered, complementary and integrated in nature and must strike the right balance between security and development concerns.[10]

How Environmental Cooperation can build Peace

In their June 2005 Worldwatch Security Brief entitled "Promoting Environmental Cooperation as a Peace-Building Tool", Ken Conca, Alexander Carius and Geoffrey Dabelko highlight the three main opportunities for environmental cooperation initiatives to serve as peacemaking tools.[11]

First, the environment offers useful qualities that lend themselves to building peace and transforming conflict and which, because of their trans-boundary nature, offer an important entry point for community building.

Second, where cross-border environmental cooperation does take root, it may help to enhance trust, establish cooperative habits, create shared identities around common resources, and establish mutually recognised rights and expectations.

Third, environmental peacemaking involves cooperative efforts, such as peace parks, shared river basin management plans, regional seas agreements, and joint environmental monitoring programmes to manage resources as a way to transform insecurities and create peace between disputing parties.

Examples of OECD Member State Approaches to Environmental Cooperation

-   The Netherlands maintains that cross-border environmental cooperation is often difficult to achieve, whether the borders are political, cultural, economic or social. But where it takes root its effects are usually positive. The Dutch Government has undertaken a range of environmental security and cooperation activities, for example its support of the Environment and Security Initiative in their work in Southeast Europe, Central Asia and the Caucasus, the Nile River Basin Initiative, as well as similar partnerships for the Mekong, the Limpopo and the Ganges, and Great Lakes Region of Central Africa.

-   Finland is increasing its efforts to strengthen multilateral cooperation in dealing with the new generation of global problems, development crises, regional conflicts that have become significant for security. The Office of the Prime Minister in the 2004 Finnish Security and Defense Policy[12] report maintains that the "increasingly cross-border nature of security threats and challenges will require increases in bilateral and multilateral cooperation in neighbourhood relations, regionally and globally."

-   Canada continues to work with other countries to seek solutions to complex environmental issues that transcend national boundaries. For example, Canada has signed bilateral agreements with over 20 countries dealing with issues ranging from watershed management (Canada-Brazil) to an Agreement on Scientific and Technological Cooperation (Canada-Japan). Canada also was responsible for launching the Arctic Council, a high-level intergovernmental forum for promoting circumpolar cooperation among Arctic States on issues of sustainable development

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[10] EU Presidency Statement on the High-Level Panel Report on Threats, Challenges and Change. Presented to the Informal Plenary Session of the United Nations General Assembly to Continue an Exchange of Views on the Recommendations Contained in the Report of the High-Level Panel on Threats, Challenges and Change. January 27, 2005.
[11] Conca, Ken, et al. "Promoting Environmental Cooperation as a Peace-Building Tool". Worldwatch Global Security Brief #6. June 2005. Page 1.
[12] Finnish Security and Defense Policy 2004: Prime Minister's Office

and environmental protection in the Arctic. [13] In addition, the Canada-China bilateral agreement on environmental issues continues to be a model for cooperation.

Lessons Learned for Strengthening Environmental Cooperation[14]

- The November 2004 Wilson Park Conference on Environment, Development and Sustainable Peace highlighted a number of important lessons learned with recent environmental cooperation efforts.

- For example, in many cases, such as the Jordan River and Mountain Aquifer in the Middle East, the challenge of managing shared water resources can indeed motivate states to overcome their fears of losing sovereignty for the larger goal of strengthening regional economic development.

- In other cases such as Botswana's Okavango River Basin Commission, environmental cooperation can provide an entry point for dialogue and for laying the foundations of future peace in conflict zones.

- Effective environmental cooperation also requires the broadest possible participation of relevant stakeholders if it is to be legitimate and sustainable on all levels and in the long term. However, the Wilton Park Conference discussion highlighted that in many cases this important and valid goal may actually immobilise cooperation efforts. In such cases, it is particularly important for the donor community to provide sufficient resources to enable non-state actors to participate meaningfully in environmental cooperation efforts.

- Experience in the forest sector has shown that environmental cooperation is most often frustrated by poor donor coordination, low institutional capacity and ineffectiveness, lack of a conceptual framework for determining resource values, and unclear tenure rights. [15]

- Environmental cooperation in the minerals sector, as with timber and water, will increasingly require multilateral and bilateral development agencies to develop integrated approaches and to combine bottom-up local efforts with top-down macro-economic approaches if conflict over valuable minerals such as diamonds, oil, coltan etc, is to be prevented.

- Regardless of the type of resource over which conflict has developed, it is important to connect the international, sub-national, and internal aspects of conflict and to understand when, where, and how fragile situations erupt into full-blown conflict.

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[13] See: <www.ec.gc/press/2001/01/10205-3_b_e.htm>
[14] Wilton Park et al. "Environment, Development and Sustainable Peace: Finding Paths to Environmental Peacemaking". Final report prepared by Meaghan Parker and Moira Feil and Annika Kramer. November 2004, page 7.
[15] Wilton Park et al. "Environment, Development and Sustainable Peace: Finding Paths to Environmental Peacemaking". Final report prepared by Meaghan Parker and Moira Feil and Annika Kramer. November 2004, page 7.

5. How Governments Address Environmental Factors in Monitoring, Mapping and Early Warning systems

Important Sources of Methodological Guidance for Early Warning

The Swisspeace Foundation's FAST system (Early Analysis of Tensions and Fact Finding) is one example of an effective methodological approach that compiles and analyses political, economic, and environmental events that may lead to tensions. Another important source of methodological guidance for early warning approaches is the 2005 "Early Warning and Early Response Handbook" prepared by the Conflict Prevention and Post-conflict Reconstruction Network of multilateral and bilateral donor organisations. The tools contained in the Handbook were developed in part in response to the results of three international workshops held by CIDA's Peacebuilding Unit on Early Warning and Early Response in the period from 2001 to 2003.[16]

Limitations with Early Wwarning Approaches

Despite growing recognition of the importance of early warning, experience has demonstrated that greater attention must be directed towards the establishment of early warning systems for environment-related factors that may lead to conflict. Environmental conflict experts maintain that where efforts have been made, they have not actually led to more robust forecasts of violent conflict. In many cases, environmental data is often missing or lacking in quality, or in other cases, the linkages between economic, social and political factors are poorly understood.

The following outlines the different early warning approaches undertaken by governments:

- The German government has supported some assessment and mapping activities of the Environment and Security Initiative of the OSCE, UNEP, UNDP, and NATO.A larger effort with a longer term perspective (2040 and 2100) is currently being undertaken by the German Advisory Council on Global Change. The government has commissioned the Council to provide an extensive report in 2007 on the topic of global environmental change and security, including a world map with environment-related conflicts.

- The Dutch Government has created the *Stability Assessment Framework (SAF),* which incorporates a wide variety of early warning models, assessment frameworks and practitioners' guidelines. The SAF is designed to assist in the development of integrated responses to sustainable stability promotion. The various parts of the SAF can be applied for stability assessment and context analysis, as well as a tool for political dialogue, to develop conflict-sensitive policy plans and implementation schemes, or to promote multi-donor cooperation.[17]

- Finland, through regional cooperation, monitors the state of the environment and its changes; reasons for those changes are currently being investigated. By the year 2008 the Ministry of the Environment will have developed indicators for the timely observation of environmental risks.[18]

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[16] The Handbook was updated in May 2004 by a working group consisting of representatives from the Forum for Early Warning and Early Response, the Pearson Peacekeeping Centre, UNDESA and the West Africa Network for Peacebuilding.

[17] Netherlands Ministry for Foreign Affairs. "The Stability Assessment Framework: Designing Integrated Responses to Security, Governance and Development". Prepared by the Clingendael Institute for the Netherlands Ministry for Foreign Affairs. 2005, pages 10-11.

[18] Finnish Prime Minister's Office. *Finnish Security and Defense Policy 2004.* 24 Sep 2004. Prime Minister's Office. 9 Jun 2006. <www.vnk.fi>. Path: English, Publications.

- The Swedish Defense Research Agency's (FOI) Department for Environment and Protection conducts research on how humans and the environment can be better protected against chemical, biological and nuclear substances as well as the effects of ionizing radiation. One important aspect of this protection is being able to detect and provide early warning of these threats to ensure that appropriate action is taken quickly.[19] The Swedish Defence Research Agency is working to predict the occurrences of oceanic quakes to provide warnings of tsunamis.[20]

- The Swiss Agency for Development and Cooperation's FAST program provides in-depth analysis of political, economic, and military factors to anticipate possible crisis situations and develop response strategies to avoid conflict in high-risk areas.

Some Key Lessons Learned with Early Warning [21]

- Early warning should provide time for planning and implementation of responses as well as for understanding the conflict dynamics in order to identify the entry points for action.

- According to UNEP's Division of Environmental Information, Assessment and Early Warning, the most promising way forward is to link historical trends with field-level monitoring of quantitative and qualitative information, together with integrated assessments.

- Central to all early warning methodologies is the need for robust analysis techniques. The information must lead to an analysis of pre-defined conflict factors and must be able to generate a prognosis that can outline the early-action steps to be taken.

- The methodological approaches developed by the Forum on Early Warning and Early Response (FEWER) should be replicated wherever possible. These include the collection and analysis of potential and actual conflict situations, as well as the provision of policy options to influence peace-building. The steps used include: context analysis, identification of conflict indicators, situation analysis, and identification of opportunities for peace.

6. How Governments Promote Environmental and Security Risk and Needs Assessment and Management

The Importance of Conflict Assessment

Donor governments are increasingly acknowledging the importance of conflict analysis for the purposes of mainstreaming the OECD/DAC "Conflict Prevention Lens" in development assistance. Various conflict analysis methods have been developed and applied, lessons have been learned, and experiences have been gained and shared by donor governments and countries in conflict through the OECD/DAC's Network on Conflict, Peace and Development Cooperation (OECD/DAC CPDC), as well as the Conflict Prevention and Post-Conflict Reconstruction Network (CPR).[22]

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[19] "Environment and Protection". FOI. 16 Dec 2006. <http://www.foi.se/FOI/template/Page_1580.aspx>.

[20] "New Method for Predicting Earthquakes". FOI. 14 Sep 2005. FOI. 13 Dec 2005. <http://www.foi.se/ FOI/Templates/NewsPage_4441.aspx>.

[21] Conflict Sensitive Development, op.cit., page 48.

[22] See: www.jica.go.jp/english/global/pdf/OECD comprehensive+security

The Use of Strategic Environmental Assessment (SEA) in Conflict Zones

Most recently, the Conflict Prevention Reconstruction (CPR) Unit of the World Bank commissioned the Netherlands Commission for Environmental Assessment to prepare a guidance note on possible approaches to Strategic Environmental Impact Assessment (SEAs) in conflict-affected countries.

Three pre-conditions were identified for ensuring the success of SEAs in conflict zones. First, there must be the possibility of mainstreaming environmental issues into a strategic decision that can be implemented. Second, all relevant stakeholders must be willing to participate in and trust the process. Third, involvement of key stakeholders must not put them at risk, especially in post-conflict situations where peace and security institutions may not be fully developed. [23]

The Netherlands Commission's report also highlighted the following elements that should be included in a conflict-sensitive SEA[24]:

- Conflict analysis that maps the drivers and motivators of conflict and which identifies key elements in the peace-building process'
- Stakeholder analysis that maps the positions, interests and values of stakeholders;
- Identification of the location and timing of key actions to prevent conflict;
- Assessment of the political and military context;
- Assessment of the key socio-economic issues.

Other Important Sources of Guidance for Conflict Assessment

Another important source of guidance for strategic conflict assessment is the 2005 "Peace and Conflict Impact Assessment Handbook" prepared by the Conflict Prevention and Post-conflict Reconstruction Network of multilateral and bilateral donor organisations.[25] The Handbook provides sets of tools for conducting peace and conflict impact assessments and for identifying and designing conflict-sensitive options and programmes. The Profile Tools aim to strengthen understanding of the context, undercurrents and components of a particular conflict situation. The Profile Tools use Political, Economic, Social/Cultural, Security, and Regional/International Lenses. The Impact Tools support the assessment of the possible political, socio-economic, security. The Decision Tools aim to help practitioners implement possible response strategies.

The following outlines the response of OECD governments to the need for risk assessment in conflict situations:

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[23] Verheem Rob, et al. "Strategic Environmental Assessments: Capacity Building in Conflict-Affected Countries". Report prepared by the Netherlands Commission for Environmental Assessment for the Conflict Prevention and Reconstruction United in the Social Development Department of the Environmentally and Socially Sustainable Development Network of the World Bank. 2005, page 13. See: <www.worldbank.org/conflict> (see "Publications" in the navigation menu)

[24] Verheem Rob, et al. "Strategic Environmental Assessments: Capacity Building in Conflict-Affected Countries". Report prepared by the Netherlands Commission for Environmental Assessment for the Conflict Prevention and Reconstruction United in the Social Development Department of the Environmentally and Socially Sustainable Development Network of the World Bank. 2005, pages 19-20. See: <www.worldbank.org/conflict> (see "Publications" in the navigation menu)

[25] See: <www.cprnet.net>

- Canada's Integrated Threat Assessment Centre coordinates its international intelligence agencies into a centralized location, thus enabling integration of information for analysis of potential security threats.[26]

- The Dutch "Stability Assessment Framework" allowed for analysis of environmental security in order to formulate a response program, facilitate political dialogue, and coordinate international efforts in conflict situations. [27]

- Sweden's Defence Research Agency (FOI) works for comprehensive risk assessment, including experimental research[28], threat analysis[29], and studies to understand the effects of biological, chemical and nuclear risks and potential new threats[30].

- Switzerland's Comprehensive Risk Analysis Management Network Initiative combines scientific and political analysis for risk identification and preparedness.

Lessons Learned with Conflict Assessment

- Despite the work undertaken in developing PCIA tools, efforts must now be directed towards assessing the impacts of these methodologies.

- PCIA tools and methodologies must provide more than an analytical lense. Rather, they should consist of sustainable methodologies for the ongoing collection of information for both policy makers and local communities.[31]

- Donor agencies must ensure that the design and implementation of conflict assessment is undertaken with the full collaboration of both state and non-state actors; more should be done to improve conflict analysis capacity within civil society organisations.

- Donor agencies must do more to ensure that conflict assessment is better integrated into development programming.

- Experience with vulnerability assessments has revealed that more effort must be undertaken to address the interaction between human and ecological systems;

- Experience with vulnerability assessment has revealed that few approaches rarely treat multiple stresses and that the indicators and indexes that are used are not linked with a clear underlying conceptual framework;

- A principal challenge is to treat the so-called "exposure unit" as a coupled social-ecological system and identify the interactions that may lead to conflict;

- As well, vulnerability assessments tend to provide specific snapshots at a particular time and do not provide adequate insights into the cumulative risk and vulnerability

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[26] "Securing an Open Society: Canada's National Security Policy". 30 Apr 2004. Government of Canada. 10 Jan 2006. <http://www.pco-bcp.gc.ca>.
[27] Netherlands Ministry for Foreign Affairs. "The Stability Assessment Framework: Designing Integrated Responses to Security, Governance and Development". Prepared by the Clingendael Institute for the Netherlands Ministry for Foreign Affairs. 2005. Pages 10-11.
[28] "Security, Safety and Vulnerability Analysis". FOI. 16 Dec 2005. <http://www.foi.se/FOI/templates/ Page_1612.aspx>.
[29] "Threat Assessment" FOI. 16 Dec 2005. <http://www.foi.se/FOI/templates/Page_1578.aspx>.
[30] "Methodology". Sida. 21 Nov 2005. Sida. 13 Dec 2005. <http://www.side.se>.
[31] Conflict Sensitive Development Programming Paper, op. cit., page 49.

factors.

- Experts further maintain that cross-scale interactions and geographic linkages must be better captured and assessed. [32]

7. How Governments Promote Environmental Conflict Prevention and Resolution

Conflict Prevention Challenges

According to the International Peace Academy, conflict prevention is a "loose conceptual framework for the increasingly broad range of actors in conflict affected zones. Conflict prevention calls attention to the warning signs—both the structural and operational indicators – to avoid outbreaks of violence."

Already back in 1992, former UN Secretary-General Boutrous Boutros Ghali highlighted the importance of preventive diplomacy and early warning. He highlighted the need to strengthen arrangements both within the UN and between Member States to not only collect and share information, but also to synthesise it with political indicators to assess whether a threat to peace exists and analyse what action should be taken. The former Secretary-General called upon ECOSOC to provide reports on the environmental, economic, and social factors that may threaten environmental peace and security. This shows the multi-faceted nature of environmental security particularly, the symbiotic nature of soft politics and peace-making.

Government approaches with conflict prevention

- One of the most important developments in environmental conflict prevention has been the creation of pooled funds that are designed to promote "whole-of-government" approaches and coherent approaches to conflict prevention. Examples of such mechanisms include the Dutch Stability Fund and the UK's Global Conflict Prevention Pool.

- The UK's FCO officially acknowledges the importance of sustainable development in conflict prevention and suggests that it should be seen as an element of conflict prevention and peacekeeping.

- Denmark along with the UK's FCO has also identified sustainable development as an important goal for its conflict prevention activities.

- Along with many other EU Member States, Finland is developing its conflict prevention activities in accordance with the EU's 2001 conflict prevention programme through participation in international land regional organisations, through bilateral political relations and through the use of financial instruments.

- Finnish development cooperation will also include more systematic actions and approaches for conflict prevention with particular emphasis on improving response capability in its partner countries.

- Sweden's approach to conflict prevention is grounded in a "culture of prevention" which has involved the convention of dialogues between key stakeholders on how best to improve the institutions involved in conflict prevention.

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[32] Stockholm Environment Institute. "International Workshop on Vulnerability and Global Change". Workshop Summary. 17-19 May 2001. Stockholm, Sweden.

- Sweden has also developed a "Ladder of Prevention" approach, which is based on the UN Charter and emphasises various methods for peaceful conflict resolution.

- The Human Security Programme of Foreign Affairs Canada has been investing in initiatives that strengthen the capacity of the international community to prevent violent conflict and build local capacity to manage conflict without resorting to violence. In 2002, as President of the G-8, Canada led the development of concrete conflict prevention action plans.

- The Dutch Government is stepping up its conflict prevention activities. As one of the main donors of the Global Partnership for the Prevention of Armed Conflict, it has initiated the European Centre for Conflict Prevention. The Dutch Government has also been engaged in several environmental management initiatives that are specifically aimed at conflict prevention, including resource management projects in the Nile Basin Initiative, the Congo Basin, and the Great Lakes Region.[33]

Key Lessons Learned with Conflict Prevention

The Finnish Ministry for Foreign Affairs in its report entitled "Development in an Insecure World" has identified a number of important lessons regarding environmental conflict prevention[34]. These include the following:

- There is a need for greater transparency and more information for and about the key stakeholders, who should be consulted in natural resource management;

- Efforts must be directed towards building a greater capacity for integrated natural resource management and conflict prevention (especially staff training, technical assistance, and institutional support) in order to prepare effective natural resource management plans;

- Environmental trends, data, and information must be collectively generated in order to build confidence between key parties and to prevent stakeholders from being defrauded;

- Cooperative management mechanisms must be established that provide the means for negotiating partners to act as equal partners;

- Conflict assessments and resource assessments should be integrated. In some cases, donor-supported efforts are far too simplistic in concentrating on one particular type of resource use.

8. How Governments Promote Post-Conflict Environmental Rehabilitation, Environmental Cooperation and Peace-Building

The Importance of Peace-building and Post-conflict Rehabilitation

The 1992 UN report "An Agenda for Peace, Preventive Diplomacy, Peacemaking and Peacekeeping" introduced the term "post-conflict peace-building for the first time as an important addition to preventive diplomacy, peacemaking and peacekeeping. The latest (2001) UN Security Council policy statement on peace-building underscores that the

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[33] Van Ardenne-van der Hoeven, Agnes. "The World's Banlieues". 15 Nov 2005: Utrecht. Ministerie van Buitenlandse Zaken. 9 Jan 2006. <http://www.minbuza.nl>.
[34] "Development in an Insecure World". Finnish Ministry for Foreign Affairs. 21 Mar 21 2005, page 116.

quest for peace requires a "comprehensive, concreted, and determined approach that addresses the root causes of conflicts, including their economic and social dimensions…"[35]

Post-conflict environmental rehabilitation has been an important focus of UNEP in recent years, as it has for a number of donor governments such as the Netherlands, Sweden, and the UK in their own bilateral efforts. The focus is typically on assessing the environmental impacts of war and conflict, identification of hotspots accompanied with mitigation strategies, and in some cases, remediation. The tools that are most often used include geographic information systems (GIS), interviews with key stakeholders, repeat photography, and site sampling.

Examples of Governments' Approaches to Peace-building and Post-conflict Rehabilitation

- The Norwegian Ministry for Foreign Affairs maintains that there are three interrelated and reinforcing dimensions to peace-building: security, political development, and social development. As regards the security dimension, Norway has focused on such priorities as: disarmament, reintegration, humanitarian mine action, control of small and light weapons, and security system reform. As regards the political development dimension, Norway has focused on supporting the development of legitimate political institutions, reconciliation among key groups, good governance, democracy and the promotion of human rights, support for civil society, and the establishment of judicial processes and truth commissions. As regards the social and economic dimensions, Norway has focused on repatriation and reintegration of refugees, reconstruction of infrastructure, promotion of health and education, development of the private sector, employment, and trade and investment.[36]

- Finland emphasizes the need to strengthen democracy, human rights, and the rule of law, with particular attention to the position of women and minorities. During the period of rehabilitation, Finland will take part in election-monitoring, in developing electoral systems, and in post-conflict reconciliation processes.[37]

- The Canadian Government has developed a new strategic approach to the Canadian Peace-Building Initiative that involves three main elements: preparedness, partnership, and implementation. The Government recognises that conflict prevention cannot be undertaken externally but must respond to local dynamics.

- Sweden's defence policy for 2005-2007 acknowledges the need to increase conflict-prevention and crisis management efforts. The Government maintains that Sweden's "capability to participate in all kinds of peace-promoting operations, from preventive measures to peace enforcement must increase both qualitatively and quantitatively.[38]

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[35] "Peacebuilding: A Development Perspective". Norwegian Ministry for Foreign Affairs. 16 Aug 2004, p13.
[36] "Peacebuilding: A Development Perspective". Norwegian Ministry for Foreign Affairs. 16 Aug 2004, pp 5-11.
[37] Finnish Prime Minister's Office. *Finnish Security and Defense Policy 2004*. 24 Sep 2004. Prime Minister's Office. 9 Jun 2006. <www.vnk.fi>. Path: English, Publications.
[38] Swedish Government Bill 2004/05:5 "Our Future Defence: The focus of Swedish defence policy 2005-2007".

Key lessons with Post-conflict Rehabilitation and Peace-building

- Among the key lessons are the growing realisation that the environment must be understood as a humanitarian issue that must be integrated into post-conflict reconstruction.

- Former UNEP Post-Conflict Assessment Unit Chair Pekka Haavisto, argues that "paying attention to environmental damage can prevent future conflicts." [39] At the same time, since it is often the poor who lose out in environmental conflict, post-conflict reconstruction must also focus on actions to eradicate poverty, injustice, and inequality.

- In many cases, countries that emerge from conflict (be it environmentally rooted or otherwise) have governance structures that are fragile or non-existent.

- In these cases, several priorities must be addressed to contribute to the reconstruction process. These include: linking demobilisation, relief, rehabilitation and development; building an accountable security sector and strengthening the rule of law; developing mechanisms for conflict resolution; working with emerging actors; and promoting a pro-poor, pro-environment governance agenda. [40]

- At the November 2004 Wilton Park Conference on Environmental Peacemaking, DFID Minister Hilary Benn identified four important recommendations for moving towards sustainable peace in the aftermath of conflict. The UK's DFID has taken some of the following steps in its contributions to the Nile River Basin, the Congo Basin Forest Partnership and the Kimberly Certification Process for conflict diamonds:

  (i)   Tackle the underlying sources of conflict by establishing property rights and responsibilities and encouraging transparency in natural resources management;
  (ii)   Build or re-establish institutional and regulatory capacity to set the foundation for sustainable development;
  (iii) Increase transparency and accountability in financial management;
  (iv)   Use natural resources as positive assets for economic growth.

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[39] Wilton Park et al. "Environment, Development and Sustainable Peace: Finding Paths to Environmental Peacemaking". Final report prepared by Meaghan Parker and Moira Feil and Annika Kramer. November 2004.
[40] Ruohokai, Olli. "Development in an Insecure World: New Threats to Human Security and their Implications for Development Policy". Finnish Ministry for Foreign Affairs. March 21, 2005, page 35.