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Proposal for Institutionalization of Emergency Response to Global Environmental Disasters

Robert J. Goldstein

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COMMENTS

PROPOSAL FOR INSTITUTIONALIZATION OF EMERGENCY RESPONSE TO GLOBAL ENVIRONMENTAL DISASTERS

Robert J. Goldstein†

INTRODUCTION

The threat of environmental disasters of global proportions, i.e., those catastrophes which spread beyond the territorial boundary of a state, or which are beyond the economic means of a single state to manage, is ubiquitous.[1] Concomitant with the pervasive transport of oil is the impending possibility of oil spills.[2] The continued use of nuclear fuel to power reactors and

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† J.D., St. John's University School of Law; LL.M. in Environmental Law, Pace University School of Law; sole practitioner in Tarrytown, New York.

[1] Environmental disasters of global proportions, of necessity, are loosely defined. They are, however, confined to those disasters with environmental consequences, as opposed to those with only humanitarian implications, notwithstanding the ineluctable human consequences of environmental degradation of any magnitude.

[2] Most existing treaties dealing with international disasters deal with oil spills. The International Convention on Oil Pollution Preparedness, Response and Co-operation, ("OPRC") defines an "Oil Pollution Incident" as "an occurrence or series of occurrences having the same origin, which results or may result in a discharge of oil and which poses or may pose a threat to the marine environment, or to the coastline or related interests of one or more States, and which requires emergency action or other immediate response." International Convention on Oil Pollution Preparedness, Response and Co-operation, Nov. 30, 1990, 30 I.L.M. 733, 737 (1991) [hereinafter OPRC].

manufacture weapons provides an enduring specter of accidental releases of radiation with its devastating impact on health and the environment.[3] The environment has also been exposed to the dramatic results of the intentional infliction of pollution as a means of prosecuting warfare in the Persian Gulf.[4] Looming ominously are the ramifications of the emission of air pollutants, implicated in both global climate changes[5] and depletion of the earth's protective ozone layer.[6]

These "major international hazards,"[7] by their nature, transcend national boundaries and political interests.[8] The costs of response and remedy are expensive even when the necessary resources can be amassed to handle the problem.[9] The upshot of these threats, and of our increasing current awareness of the consequences of continuing pollution on a global level, mandate

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[3] Despite the claim of environmentalists that "Chernobyl drove a stake through the heart of nuclear power, at least in Western Europe, . . . France has opened 13 nuclear reactors since Chernobyl . . . and it is laying plans to build plants in Hungary to supply customers in Germany and Italy." L.A. TIMES, Apr. 23, 1991, at 7.

[4] The Gulf War resulted, *inter alia*, in an oil slick estimated at one million barrels. 28 UN CHRON., June 1991, at 16.

[5] Some scientists see a linkage between global warming and the "unusually severe flooding — two feet higher than ever previously recorded" which ravaged Bangladesh following the May 1, 1991 typhoon. John Horgan, *Burning Questions: Scientists Launch Studies of Kuwait's Oil Fires*, 265 SCI. AM., July 1991, at 17.

[6] Industrial gases, notably chlorfluorocarbons (CFCs), threaten to deplete the planet's protective ozone shield to such an extent that the number of human and animal cancers would rise sharply and the ocean's food chain would be disrupted. THE WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, OUR COMMON FUTURE 33 (1987) [hereinafter OUR COMMON FUTURE].

[7] A cogent definition of the "major" aspect of "major international hazard" has been posited as substantial environmental injury,

> affecting the life-support system immediately or in the foreseeable future. This impact may be (i) global, such as threatened ozone depletion or climate modification; (ii) regional, having a more limited geographic effect, such as transnational acid rain or pollution of an international river; or (iii) species or resource specific, such as extinction of an endangered species or depletion of an essential local resource.

Nicholas A. Robinson, *Introduction: Emerging International Environmental Law*, 17 STAN. J. INT'L L. 229, 244-45 (1981).

[8] Eduard Schevardnadse, then Foreign Minister of the Soviet Union, proposed a concept which he termed "politecology" as a combination of politics, economics and ecological security to fulfill the task of environmental protection. Eduard A. Schevardnadse, *Ecology and Diplomacy*, 20 ENVT'L POL'Y & L. 20 (1990).

[9] The cost of the Exxon Valdez clean-up in Prince William Sound, Alaska has been estimated at $15 billion. NEWSDAY, Oct. 19, 1991, at 16.

a global response.

The concept of a "green cross"[10] to respond with immediate assistance in difficult environmental emergencies, is not a new one, but is an idea which gained tremendous momentum in the aftermath of the Gulf War.[11]

The United Nations Environment Programme (UNEP),[12] headquartered in Nairobi, Kenya, has decided to establish an experimental center for urgent environmental assistance.[13]

Part I of this article presents further justification for the continued existence of a global response entity (GRE), such as the U.N. Center, to respond to environmental disasters of global

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[10] One proponent of the "green cross" concept was then Soviet Deputy Foreign Minister Vladimir F. Petrovsky, who "suggested the creation of a 'green cross' center for emergency environmental assistance" in front of the United Nations General Assembly on October 5, 1989. Paul Lewis, *Greater U.N. Role Urged by Soviets*, N.Y. TIMES, Oct. 5, 1989, at A20, col. 1.

[11] At an international conference in June 1991, on the use of the environment as a tool of war, held in Ottawa, Canada, the idea of a "green cross" which "would respond to environmental accidents and acts of [environmental] terrorism the way the International Red Cross responds to human misery" was proposed. Tim Harper, *Support Growing for Environmental Response Team*, TORONTO STAR, July 13, 1991, at A19.

[12] UNEP is an outgrowth of the 1972 United Nations Convention on the Human Environment (Stockholm Conference) which produced a Declaration on the Human Environment, *Declaration of the United Nations Conference on the Human Environment*, U.N. Doc. A/Conf. 48/14 and Corr. (1972) [hereinafter *The Stockholm Declaration*] the Action Plan of which called for implementation by an international environmental management body, which was established by the General Assembly as UNEP. Mark Allan Gray, *The United Nations Environment Programme: An Assessment*, 20 ENVT'L L. 291, 293-94 (1990).

[13] The U.N. Center for Urgent Environmental Assistance (U.N. Center) will operate for an 18-month trial period commencing in 1992. As proposed, the center will "be used at the request of governments to help them cope with environmental disasters such as the Chernobyl nuclear plant accident and the effects from the war in the Persian Gulf region." *UNEP Governing Council Agrees to Expand Units Handling Industry, Environmental Law*, INT'L ENV'T REP. (BNA), June 5, 1991. During its trial-period, the U.N. Center will be staffed by young volunteers, creating a roster of experts and a listing of emergency equipment. *Id.* Among the other proposals which UNEP was considering were:

> "creation of a high-level Ecological Security Council within the U.N. system[;] development of a centre to provide urgent assistance in environmental emergencies[;] adoption of a code of environmental conduct[;] greater use of satellites or space laboratory stations to monitor the environment[;] [and] a system of arbitration on international environment disputes and an insurance scheme backed by state guarantees governing ecological damage, liability and compensation."

Rory Channing, *Environmentalists Eye Disarmament Savings, "Green Bonds"*, REUTER LIBR. REP., May 16, 1989.

proportions; Part II examines the framework of existing models for such an entity; and Part III proposes both a legal framework as well as a mission for that entity.

I. THE GLOBAL RESPONSE ENTITY (GRE)

A. *Justification: Environmental Disasters*

The environmental disasters encountered in the last decade alone provide adequate justification for an institution to amass global resources and elicit universal cooperation in combating potential crises. The most compelling reason for a global response entity (GRE) to respond to these crises is the inter-relationship between the emission of pollutants in one region of the world and its effects upon another region.

No single catastrophe demonstrates this need more clearly than the environmental consequences of the Gulf War.

> We are witness today to an act of gross environmental vandalism. . . .
>
> The Iraqi destruction of Kuwait's refineries, storage tanks, collection networks and oil wells is not a consequence of battle but the execution of a national policy that threatens the peoples and environments of the Persian Gulf region. The threat is to belligerents and non-belligerents alike; the young and old, women and children suffer equally with those who were locked in combat. Ironically, the environment of Iraq is threatened least. The pollution generated by burning the Kuwaiti oil facilities is being transported across borders, threatening the community of nations to the south and east. Every day roughly 15,000 tons of smoke are produced. That smoke is stabilizing in the lower atmosphere and dispersing across the Persian Gulf, Saudi Arabia, the Gulf Emirates, Iran, and threatening Pakistan and India. Smoke clouds are heaviest over Kuwait and remain substantial for a thousand kilometers downwind. Repeated black rain events have occurred over Kuwait, the Persian Gulf and Iran. . . . Water supplies can be polluted by soot fallout. . . .[14]
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> [W]e are not having one Chernobyl, we are having many Chernobyls in Kuwait.[15]

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[14] *Special Conference About the Middle-East*, FED. NEWS SERV., Mar. 19, 1991 (Statement of Richard Small).

[15] *Id.* (Statement of Robert Gordon).

The war resulted in six to eight million barrels of oil being spilled into the Persian Gulf.[16] Damage to oil wells caused 200 pools of oil containing twenty million to thirty million barrels of oil.[17] The cost of the Gulf clean-up has been enormous: "Gulf environmentalists say Gulf States cannot alone cover cleanup costs, put by Kuwait at $1.2 billion dollars and Saudi Arabia at about $900 million dollars."[18] Other estimates range as high as $2.8 billion dollars.[19]

A scientific team sent to Saudi Arabia by the United Nations Environment Programme (UNEP) "confirmed that 'extensive damage' had been inflicted to some sensitive coastal ecosystems, including mangroves, fishery breeding grounds and habitats of endangered species."[20] Burning oil wells "have spewed thousands of tonnes of toxic gases into the air and sent a cloud of black smoke across the northern Gulf into Iran. The smoke has even blackened the snow on Himalayan peaks."[21] Although the wells have been capped scientists say that the effects will linger long after the fires are out.[22]

A global response entity might have acted with the same acuity as the massive forces which engaged in Operation Desert Storm, minimizing the environmental results in the same way that military victory was pursued.

The 1986 nuclear reactor accident at the Chernobyl facility in the then Soviet Republic of the Ukraine "caused the first officially reported radiation deaths in a nuclear power plant accident and released radioactive material that drifted as far as the United States."[23] Despite the passage of almost six (6) years since the Chernobyl accident, its environmental consequences

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[16] Samia Nakhoul, *Curse of Saddam to Haunt Kuwait for Years, Scientists Say*, REUTER LIBR. REP., Nov. 7, 1991.

[17] *Id.*

[18] *Id.*

[19] Mariam Isa, *Gulf States Seek 2.8 Billion Dollars to Clean Up Pollution*, REUTER LIBR. REP., Nov. 19, 1991.

[20] UN Chron., *supra* note 4.

[21] Diana Abdallah, *Gulf States Want U.N. Help to Combat Environmental Disaster*, REUTERS LIBR. REP., Oct. 18, 1991.

[22] *Id.*

[23] *Developments in the Law — International Environmental Law*, 104 HARV. L. REV. 1484, 1487 (1991). [hereinafter *Developments*].

continue to mount.[24]

A global response entity might have been able to mobilize to contain the release, provide state-of-the-art decontamination and clean-up, and disseminate warnings and instructions to the threatened populations.

Coordination and leadership could also be provided for the clean-up of existing environmental hazards in those jurisdictions where they remain a low-priority due to economic constraints. These environmental hazards are typified by Eastern Europe's recently unveiled grave ecological crises.[25]

Finally, perhaps the most ominous of the threats which face the global community is the result not of a singular catastrophe, but rather of decades of pollution which could cause global warming. As one of the important consequences, "[t]his could cause sea level rises over the next 45 years large enough to inundate many low-lying coastal cities and river deltas. It could also drastically upset national and international agricultural production and trade systems."[26]

The conclusion which must be drawn from these events and many others is that the environmental disasters threaten the security of the international community and that the international community must therefore respond to such threats on a global level.

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[24] According to the director of the Radiobiology Institute of the Byelorussian Academy of Sciences, "[p]lutonium and other radioactive wastes from the 1986 Chernobyl nuclear accident . . . continue to threaten the health of a growing number of people who inhale or ingest them . . . menacing people hundreds of miles from the damaged reactor . . . ." Thomas W. Lippmann, *Chernobyl Contamination Still Spreading, Soviet Says*, WASH. POST, July 5, 1991, at A8. Soviet citizens have been attributing many illnesses to presumed radiation exposure when no such link has been demonstrated, and when it has been suggested that anxiety and stress were responsible for some reported illnesses. *Id.*

[25] "In Czechoslovakia, 70% of the rivers are polluted; in Poland, half the cities and 35% of industry do not treat sewage and other waste; in eastern Germany, 15,000 hazardous waste sites haven't even been evaluated." Michael Parrish, *E. Europe Seeks Way to Pay Environment Clean-Up Tab, Pollution: Old Soviet Bloc Countries Want U.S. Techonology to End Contamination. But Can They Afford It?*, L.A. TIMES, July 12, 1991, at A1, col. 1.

[26] OUR COMMON FUTURE, *supra* note 6. "With polar ice melting and oceans warming, sea levels could rise as much as three feet in a century, inundating coastal lowlands." ROBERT E. TAYLOR, AHEAD OF THE CURVE: SHAPING NEW SOLUTIONS TO ENVIRONMENTAL PROBLEMS 48 (1990). Compare Taylor's prognosis with the result of a two foot rise in flooding in Bangladesh. *See* Horgan, *supra* note 5.

B. *Legal Basis: International Security*

Much of the enthusiasm for a GRE arises in consequence of the actions of the United Nations Security Council in response to the Iraqi invasion of Kuwait and from the "hope stirred . . . that . . . the United Nations can fulfill its role as the keeper of international peace and security."[27]

That "hope" correlates to mobilization of international forces to meet *all* challenges to global security.[28] The Gulf War has therefore triggered debate on the need for international response to disasters.[29]

"The UN Security Council can make decisions that are binding on member nations in the furtherance of peace."[30] The principle that the "peace and security" of the international community is threatened by the interruption of the functioning of the earth's "natural systems" is embodied in the World Charter for Nature:

> The General Assembly,
>
> Reaffirming the fundamental purposes of the United Nations, in particular the maintenance of international peace and security, the development of friendly relations among nations and the achievement of international co-operation in solving international problems of an economic, social, cultural, technical, intellectual or humanitarian character,
>
> Aware that:
>
> (a) Mankind is a part of nature and life depends on the uninterrupted functioning of natural systems which ensure the supply of energy and nutrients . . . .[31]

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[27] Stephen M. DeLuca, Comment, *The Gulf Crisis and Collective Security Under the United Nations Charter*, 3 PACE Y.B. INT'L L. 267 (1991).

[28] U.N. CHARTER art. 24, para. 1.: "1. In order to ensure prompt and effective action by the United Nations, its members confer on the Security Council primary responsibility for the maintenance of international peace and security, and agree that in carrying out its duties under this responsibility the Security Council acts on their behalf."

[29] Claude Regin, *Gulf War Relief Starts Debate on U.N. Emergency Response*, REUTER LIBR. REP., July 27, 1991.

[30] *Developments*, *supra* note 21, at 1587.

[31] WORLD CHARTER FOR NATURE, U.N. Doc. A/37/L4 and Add. 1 (1982), *reprinted in* XXI UNITED NATIONS RESOLUTIONS 239 (Djonovich ed. 1986); *See also* WOLFGANG E. BURHENNE & WILL A. IRWIN, THE WORLD CHARTER FOR NATURE, LEGISLATIVE HISTORY

Just as it was incumbent upon the Security Council to act in preservation of the "peace and security" of the international community when Iraq invaded and occupied the sovereign State of Kuwait, it is incumbent upon that body to mobilize the Member States to combat environmental disasters of global proportions.

This responsibility was reflected in the statement of then Soviet Foreign Minister Eduard Shevardnadze at the UN General Assembly:

> Political Ecology requires urgent planetary decisions at the highest political level and an internationalization of national efforts through the United Nations, by consolidating its leading environmental branch, the appropriate agency of this organization. And since we are speaking of a major component of international security, political ecology requires the involvement of the Security Council in solving problems and activating such tools as transparency and strict international monitoring.[32]

The realization and assertion by the then Soviet Foreign Minister that threats to the environment presented the nations of the world with a security problem, provides the impetus and the justification for the Security Council to assume responsibility for global environmental catastrophes.

C. *The Nature of a GRE*

The following components would be important to an entity which would respond to major global environmental disasters:[33] (1) communications facilities;[34] (2) trained personnel with tech-

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AND COMMENTARY, at 9 (1986).

[32] *Schevardnadse — Statement at the UN General Assembly*, TASS, Sept. 26, 1989.

[33] Lynda Chalker, Overseas Development Minister of the United Kingdom, recently "outlined a three-point Action Plan for Disaster Response . . . [which] comprises: Rapid assessment of the problem; Coordination of relief; [and] deployment of skilled teams and equipment." Tim Butcher, *British Aim to Lead World in Disaster Aid*, DAILY TELEGRAPH, Aug. 15, 1991.

[34] This capability is enhanced by improved satellite technology which has improved global communications. "The role played by modern communications in post-disaster relief operations is becoming increasingly widespread and sophisticated. Geostationary meteorological and geosynchronous communications satellite systems from a number of nations [sic] organisations serve various national and regional needs worldwide." Gerard O'Dwyer, *Disaster Communications; IIC Conference on Disaster Communications*,

nical and scientific expertise;[35] (3) access to state-of-the-art clean-up technology and equipment;[36] (4) transportation;[37] (5) access to disaster sites;[38] and (6) funding for the above.[39] The key to an effective emergency force is "speedy action."[40]

The need for a rapid response could be fettered by the political processes necessary for the international community.[41]

Clear from the requirements for a global response entity is what this entity is not. This entity does not require a mandate similar to the United States Environmental Protection Agency (USEPA), whose framework would likely be imitated in an institution dealing in general with global environmental protection.[42]

While the framework for an institution for emergency re-

COMM. INT'L, Aug. 1991, at 24.

[35] Proposals include the use of a directory of experts and the training of a military-type force in environmental clean-up techniques. Military personnel and equipment have been used in environmental disasters such as the Exxon Valdez oil spill in Prince William Sound, Alaska. David C. Morrison, *Operation Feel Good*, 23 NAT'L J., Oct. 26, 1991, at 2593. The U.S. Coast Guard is an integral part of the U.S. National Response System as provided for in the U.S. Oil Pollution Act of 1990, 33 U.S.C. §1321 (j) (1990).

[36] The capability of response is greatly enhanced by the advances in pollution control fostered by such "technology forcing" measures as the United States Clean Water Act and Clean Air Act. Federal Water Pollution Control Act (FWPCA), 33 U.S.C. §§1251 *et seq.* (West Supp. 1992), Clean Air Act (CAA), 42 U.S.C. §§7401 *et seq.* (West Supp. 1992).

[37] The possibility exists that military logistics will be available to aid in responding to global environmental disasters in light of the end of the Cold War. An example of the effectiveness of military logistics is found in the United States Defense Department's "Humanitarian Assistance Program" (HAP). In response to the typhoon and flooding devastating Bangladesh, a U.S. Navy-Marine Corps squadron "tendered water purification and reconstruction services and provided food and medicine to the survivors" of the storm which had taken up to 100,000 lives. Morrison, *supra* note 35.

[38] This would be one function of a treaty. *See* OPRC, art. 7, para. 3. *Infra* text accompanying note 50.

[39] The costs of set-up of the entity are sobering. For example, the cost of state-of-the-art communications facilities "is viewed as too high for most governments and relief agencies." O'Dwyer, *supra* note 34.

[40] House of Representatives Select Committee on Hunger, The Decade Disasters: The United Nations' Response, FED. NEWS SERV., July 31, 1991 (testimony of Andrew S. Natsios, Dir., Off. of U.S. Foreign Disaster Assistance, U.S. Agency For Int'l Dev.).

[41] In the event of political deliberations in which there was no consensus, in contrast with the deliberations regarding Iraq's invasion of Kuwait, *see* DeLuca, *supra* note 27, at 279, n. 67, the precedent of the Gulf War in mobilizing international resources may prove meaningless. "During an emergency, however, these deliberative procedures are disastrous. UN agencies need to be exempt from these regular administrative procedures during emergencies." House of Representatives, *supra* note 40.

[42] *See* Robinson, *supra* note 7.

sponse could exist under the auspices of a "global EPA" which is based upon the "four principal functions which an institution must perform in order to cope with such international environmental hazards,"[43] the six components listed above are the only ones necessary to respond to emergent situations.

The high set-up cost of a GRE mandates international funding cooperation. The Gulf War was accomplished by a commitment from the United States of its overwhelming military forces. The GRE cannot rely upon the resources of one State for its funding.[44]

With the exception of enforcement activities, which such an entity can initially forego, no governmental basis for a global response entity is needed. In essence, to act as does the International Red Cross, a non-governmental organization (NGO), the entity must be independent.

Humanitarian relief for disasters is provided efficiently and effectively by such NGOs as the International Red Cross. The combination of the United Nations and NGOs has become status quo in response to humanitarian disasters.[45]

A component crucial to the effectiveness of the GRE in environmental disasters is funding. Funds for humanitarian assistance are generally raised case-by-case, based upon appeals to donors, with a natural priority given to the saving of peoples'

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[43] 1. The institution must have scientific competence, using the existing scientific community rather than duplicating its efforts. It is important that scientists control data collection and define as fully as possible the nature of international environmental hazards . . . .

2. The institution must have some means to gauge the risk which the data reveal. This is a difficult task, and several tools may be appropriate depending on the nature of the hazard . . . .

3. The institution must have means to respond to the hazard proportionate to its risk . . . .

4. Finally, the institution must have oversight, monitoring, auditing, and follow-up capabilities.

Id. at 248-49.

[44] "The United States has heretofore not been put in a position where it would have an opportunity to aid a victim State in a situation where the United States would have to confront one of its allies or otherwise act against its own interest." DeLuca, *supra* note 27, at 300.

[45] A recent agreement was reached between the Office of the United Nations Disaster Relief Coordinator (UNDRC) and the League of Red Cross and Red Crescent Societies to "pool 'expertise and information' for tackling disasters." *Disaster Relief Groups Agree to Coordinate Efforts*, REUTER LIBR. REP., Oct. 2, 1991.

lives before environmental clean-up.

Could a GRE thrive as an NGO with voluntary funding? The example of the UNEP clearly demonstrates that without government funding as a start, the entity cannot function with the effectiveness needed. "Hamstrung by a shortage of personnel and funds, UNEP simply lacks the resources to tackle such emerging issues as . . . environmental warfare."[46]

While an NGO can be effective in providing medical aid and food supplies in emergencies, the ability of a volunteer force to handle an environmental disaster has not been demonstrated.[47]

To act in environmental disasters, the GRE therefore must be more than an NGO. It must be based upon treaties which allow for initial funding, access to sites, participation in clean-up, and a liability scheme that will eventually pay for the GRE's functioning.

The need for a GRE being established and the capability of the international community to respond to global disasters being demonstrated, it is clear that the international community must examine a framework under which such an entity can function. Part II sets forth several existing models on which an agreement to empower a GRE can be predicated.

II. Institutional Models in Existence

The international community has several models in existence which grapple with the likelihood of environmental disasters. Each of these models attempts to incorporate some of the aforementioned components necessary for a global response entity ("GRE"). The following are examples of those models:

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[46] Gray, *supra* note 12, at 313 (footnote omitted).

[47] The need for an international basis for such an entity is apparent from the statement of a U.S. assistant defense secretary attributing the humanitarian aspects of "HAP" type efforts as seeking "to reduce or eliminate the causes of dissatisfaction by assisting our *friends* . . . ." Morrison, *supra* note 35 (emphasis added). This distinction, based upon political motivations, between "friends" and non-friends, obviates the need for a non-partisan entity.

A. *International Framework: The International Marine Organization: International Convention on Oil Pollution Preparedness, Response and Co-Operation (OPRC)*

The International Marine Organization: International Convention on Oil Pollution Preparedness, Response and Co-Operation of 1990 (OPRC)[48] is the most recent international effort to formulate strategies to cope with environmental disasters which are beyond the means of a single nation to remedy. The context of oil spills is an appropriate model for the risks described above.

Article 6 of the OPRC provides for "Oil Pollution Emergency Plans" which shall require that:

> (1) Each party shall establish a national system for responding promptly and effectively to oil pollution incidents. This system shall include as a minimum:
>
> (a) the designation of:
>
> (i) the competent national authority or authorities with responsibility for oil pollution preparedness and response;
> (ii) the national operational contact point or points, which shall be responsible for the receipt and transmission of oil pollution reports . . . ;[and]
> (iii) an authority which is entitled to act on behalf of the State to request assistance or to decide to render the assistance requested;[and]
>
> (b) a national contingency plan for preparedness and response which includes the organizational relationship of the various bodies involved, whether public or private, taking into account guidelines developed by the Organization.[49]

This article actually mandates a "national contingency plan" to manage oil spills and requires a "national operational contact point" with the authority to act in cases of emergency.

The balance of the OPRC text embodies each of the six components necessary for a GRE.

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[48] International Convention on Oil Pollution Preparedness, Response and Co-operation, Nov. 30, 1990, 30 I.L.M. 733 (1991) [hereinafter OPRC].

[49] *Id.* at 739.

Article 6(2) discusses one of these, communications:

> (2) In addition, each party . . . shall establish: . . . .
>
> > (c) detailed plans and communications capabilities for responding to an oil pollution incident. Such capabilities should be continuously available . . . .[50]

Article 6 also addresses the training of personnel, the availability of equipment, and transportation. It mandates a "minimum level of pre-positioned oil spill combating equipment," training programs, "detailed plans and communication capabilities for responding to an oil pollution incident" which are to be "continuously available," and "a mechanism or arrangement to co-ordinate the response to an oil pollution incident with, if appropriate, the capabilities to mobilize the necessary resources."[51]

The OPRC also deals with access to the territory of its parties for pollution response activities:

> (3) In accordance with applicable international agreements, each Party shall take necessary legal or administrative measures to facilitate:
>
> > (a)the arrival and utilization in and departure from its territory of ships, aircraft and other modes of transport engaged in responding to an oil pollution incident or transporting personnel, cargoes, materials and equipment required to deal with such an incident; and
> >
> > (b)the expeditious movement into, through, and out of its territory or personnel, cargoes, materials and equipment referred to in subparagraph (a).[52]

The availability of the resources of a state simply for staging a response operation necessitates an international agreement to that effect.

The final "component", funding, is handled by taxing the party responsible for the pollution. The OPRC text accepts as a "general principal of international environmental law"[53] that the

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[50] *Id.*

[51] *Id.* at 739-40.

[52] Article 7, section (3).

[53] The Statute of the International Court of Justice, 1945, annexed to the Charter of the United Nations, Article 38, reads: "1. The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply: . . . (c)

"polluter pays."[54] The simplicity of this principle belies its importance in establishing a potential for a system of funding responses and remedies by taxing the polluter.

It is noteworthy that OPRC Conference Resolution 10[55] calls for the development of an "appropriate instrument to expand the scope of the OPRC Convention to apply, in whole or in part, to pollution incidents by hazardous substances other than oil and prepare a proposal to [that] end."[56]

OPRC therefore contains the framework for an effective GRE in an international context. Although currently dealing only with oil pollution, the OPRC text provides a model for an international agreement in which the parties agree to a legal basis for the GRE. Because environmental disasters include those which are on a more localized scale than a marine oil spill, it is necessary to study regional arrangements, which could be the mechanism for the GRE to deal with more localized environmental disasters.

B. *Regional Framework: Models Under UNEP*

Two of the United Nations Environment Programme's (UNEP) successes[57] that provide models for study of a regional framework for a global response entity under the auspices of

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the general principles of law recognized by civilized nations . . . ."

[54] *Nations Sign Convention Calling for Renewed Efforts to Protect, Clean Up Baltics*, 15 INT'L ENVT'L REP. 223 (April 22, 1992) (Baltic Sea Environmental Declaration including a policy to "implement the polluter pays principle.") An example of the principle of "polluter pays" in action is demonstrated in the effectiveness of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) enacted in the United States. 42 U.S.C.A. § 9601 *et seq.* (West Supp. 1992). With regard to the disposal of "hazardous wastes", CERCLA provides for joint, several and strict liability for:

(1) the owner and operator of a vessel or a facility,

(2) any person who at the time of disposal . . . owned or operated any facility . . . ,

(3) any person who by contract, agreement, or otherwise arranged for disposal . . . , and

(4) any person who accepts or accepted any hazardous substances for transport . . . CERCLA §107(a), 42 U.S.C.A. §9607(a).

[55] Expansion of the Scope of the International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990, to Include Hazardous and Noxious Substances, 30 I.L.M. at 760.

[56] *Id.* at 761.

[57] In light of expectations, UNEP's achievements have been termed remarkable. Gray, *supra* note 12, at 297.

UNEP are the Barcelona Convention on the Mediterranean Sea,[58] regarding emergency response to oil and chemical spills, and the Kuwait Convention on the Persian Gulf.[59]

1. *The Barcelona Convention*

The Barcelona Convention adopted a protocol[60] which pledges co-operation in cases of "grave and imminent danger to the marine environment, the coast or related interests of one or more of the Parties . . . ."[61]

The Protocol urges the parties to "maintain and promote . . . contingency plans."[62] It also encourages information sharing,[63] communications sharing,[64] and reporting instructions,[65] and provides for mutual assistance.[66] However, it essentially mandates nothing.[67]

The language of Article 10 of the Protocol is ambivalent:

> 1. Any party requiring assistance for combating pollution by oil or other harmful substances polluting or threatening to pollute its coasts may call for assistance from other — Parties, either directly or through the regional centre referred to in article 6, starting with the Parties which appear likely to be affected by the pollution. This assistance may comprise, in particular, expert advice and the — supply to or placing at the disposal of the Party concerned of products, equipment and nautical facilities. Parties so requested shall use their best endeavours to render this — assistance.

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[58] Convention for the Protection of the Mediterranean Sea Against Pollution, Feb. 16, 1976, *reprinted in* 15 I.L.M. 290 [hereinafter Barcelona Convention].

[59] Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution, Apr. 24, 1978, *reprinted in* 17 I.L.M. 511 [hereinafter Kuwait Convention].

[60] "Protocol Concerning Co-Operation In Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency" in 1976, *reprinted in* 15 I.L.M. 306 [hereinafter Barcelona Protocol].

[61] *Id.* at art. 1.

[62] Barcelona Protocol art. 3, 15 I.L.M. at 307.

[63] Barcelona Protocol art. 6, 15 I.L.M. at 307.

[64] Barcelona Protocol art. 7, 15 I.L.M. at 308.

[65] Barcelona Protocol art. 9, 15 I.L.M. at 309.

[66] Barcelona Protocol art. 10, 15 I.L.M. at 309.

[67] "It is certainly hard to picture the (United States) EPA without authority to cancel registrations, deny permits, or seek injunctions." *Developments*, *supra* note 21, at 1591.

> 2. Where the Parties engaged in an operation to combat — pollution cannot agree on the organization of the [operation], the regional centre may, with their approval, coordinate the activity of the facilities put into operation by these Parties.[68]

This ambivalence is reflected in the entire Protocol; it mandates no assistance, it creates no vehicle to coordinate a response, and it mandates no entity to take action in the event of an emergency.

UNEP has been criticized with regard to the Mediterranean Sea agreements, which "merely commit the parties to create liability, compliance and compensation procedures."[69]

2. *The Kuwait Convention*

The Kuwait Convention adopted a protocol[70] in 1978 which had an approach that was more focused on response to emergencies than the Barcelona Convention with the notable addition of a "Marine Emergency Mutual Aid Centre."[71]

The Protocol directs contracting states faced with a "marine emergency situation" to:

> (a) take every appropriate measure to combat pollution and/or to rectify the situation;
> (b) immediately inform all other Contracting States, either directly or through the Centre, of any action which it has taken or intends to take to combat the pollution. The Centre shall promptly transmit any such information to all other Contracting States;
> (c) make assessment of the nature and extent of the marine emergency, either directly or with the assistance of the Centre; [and]
> (d) determine the necessary and appropriate action to be taken with respect to the marine emergency, in consultation, where appropriate, with other Contracting States, affected States and the Centre.[72]

The Protocol further empowers the Centre "[i]n cases of

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[68] 15 I.L.M. at 309.

[69] Gray, *supra* note 12, at 306.

[70] "Protocol Concerning Regional Co-operation in Combating Pollution by Oil and Other Harmful Substances in Cases of Emergency", *reprinted in* 17 I.L.M 526 [hereinafter Kuwait Protocol].

[71] Kuwait Protocol art. III, 17 I.L.M. at 528-30.

[72] Kuwait Protocol art. X, 17 I.L.M. at 532.

special emergencies [not defined], [to] call for the mobilization of resources made available by the Contracting States to combat pollution by oil and other harmful substances."[73]

Nevertheless, the Persian Gulf's "Centre", the Regional Organization for the Protection of the Marine Environment (ROPME), has been ineffective in the aftermath of the Gulf War.[74] The post-Gulf War ecological crisis is way beyond the means of a regional organization, even one with such affluent members as ROPME. ROPME members have sought international aid to handle the crisis.[75]

Proposals made for the future of ROPME include: (1) enhancement of the Marine Emergency Mutual Aid Center; (2) a regional oil spill contingency plan; (3) a regional agreement for the transfer of resources for the containment and combating of spills; (4) a plan of action to address long-term effects of spills and oil well fires; (5) a technical cooperation committee; and (6) special efforts devoted to the protection of sensitive habitats and endangered species.[76]

With the exception of ROPME's minimal response to the results of the Gulf War, no test of the efficacy of a regional convention with regard to a "major" environmental disaster has been demonstrated. Thus, the Gulf War ecological crisis demonstrates that international cooperation is necessary to combat large scale pollution.

The concept of a regional framework demonstrated by both the Barcelona Convention and the Kuwait Convention has several beneficial aspects. The response entity is localized, allowing for more modest communication and transportation costs. The personnel can be better trained to handle more localized problems. Despite its weaknesses, the concept of a regional entity to respond to certain environmental disasters is a viable

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[73] Kuwait Protocol art. XI, ???5, 17 I.L.M. at 533.

[74] "[ROPME] . . . is little more than a paper organization. Its main weakness has been the sharp political differences among its members, especially former gulf war foes Iran and Iraq." Nadim Kawash, *Environment: Gulf Needs Anti-Pollution Task Force*, INTER PRESS SERV., Feb. 15, 1991.

[75] ROPME Members, which include Iran, Bahrain, Kuwait, Saudi Arabia, Oman, Qatar, and the United Arab Emirates, have asked for $2.8 billion dollars from the international community to clean up the pollution in the Persian Gulf. Isa, *supra* note 19.

[76] *International Maritime Organization Launches Gulf Oil Pollution Disaster Fund*, INT'L ENV'T REP. (BNA), Mar. 5, 1991, at 127.

one.[77]

C. *National Framework: The Oil Pollution Act of 1990*[78]

In examining the framework for a global response entity, it is important to view what institutions individual States have established to respond to environmental disasters.[79]

The United States Congress reacted to the enormous environmental risks associated with the transport of petroleum products by enacting the Oil Pollution Act of 1990 (OPA).[80] Congress declared that:

> there should be no discharges of oil or hazardous substances into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone,[81] or in connection with activities under the Outer Continental Shelf Lands Act . . . or the Deepwater Port Act . . . or which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States . . . .[82]

The act amends the Clean Water Act and implements a federal response system as well as an Oil Spill Liability Trust Fund. This fund has been established for response actions by the Secretary of Transportation at the direction of the President in the amount of one billion dollars.[83]

The response mechanism is set-up under "National Response System" and creates a "National Response Unit".[84] The National Response Unit under the auspices of the United States

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[77] The aftermath of the Gulf War resulted in concededly overwhelming environmental disasters. ROPME was designed to deal with smaller-scale problems.

[78] 33 U.S.C. §1321, Clean Water Act §311 (West Supp. 1992).

[79] This is important as both a "framework" for the establishment of a GRE and for the contemplated use of national mechanisms in the context of the GRE. *See infra* Part IV.

[80] *See* the legislative history of the act in H.R. Conf. Rep. No. 653 at 146, which lists three specific incidents: the Exxon Valdez (Prince William Sound, Alaska), the American Trader (Huntington Beach, California), and the Mega Borg (Gulf of Mexico). Charles Openchowski, *Federal Implementation of the Oil Pollution Act of 1990* 21 ELR 10605, Oct. 1991.

[81] "[T]he entire zone established or to be established by the United States under article 24 of the Convention on the Territorial Sea and the Contiguous Zone." 33 U.S.C. §1321 (a) (9)(C.W.A. §311(a)(9)).

[82] 33 U.S.C. §1321(b)(1)(C.W.A. §311(b)(1)).

[83] Openchowski, *supra* note 6.

[84] 33 U.S.C. § 1321 (j), C.W.A. §311(j).

Coast Guard:

> (A) shall compile and maintain a comprehensive computer list of spill removal resources, personnel, and equipment that is available worldwide . . . which shall be available to Federal and State agencies and the public;
>
> (B) shall provide technical assistance, equipment, and other resources requested by a Federal On-Scene Coordinator;
>
> (C) shall coordinate use of private and public personnel and equipment to remove a worst case discharge, and to mitigate or prevent a substantial threat of such a discharge, from a vessel, offshore facility, or onshore facility . . . ;
>
> (D) may provide technical assistance in the preparation of Area Contingency Plans . . . ; [and]
>
> (E) shall administer Coast Guard strike teams established under the National Contingency Plan . . . .[85]

The National Response Unit established by the OPA is to be equipped to handle emergencies in conjunction with the Coast Guard, which is an established military service that is well-equipped and trained in the handling of exigent operations at sea. The potent combination of an existing military organization with a mandate to respond to environmental disasters, is the most desirable framework for a global response institution.

III. Conclusion: Proposal for the GRE

The apparent success of the U.N. Security Council in prosecuting the Gulf War against Iraq has propelled the Council into an unprecedented international position of power.[86]

In this climate, the U.N. Security Council could deal effectively with disasters as the body responsible for the GRE.[87] As

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[85] *Id.* at sub para. (j)(2).

[86] "In view of the cooperation between the United States and the Soviet Union [or successor Commonwealth] in the post-cold war era, the Security Council has a better chance of fulfilling its role as the body of the United Nations charged with the primary responsibility of maintaining international peace and security." DeLuca, *supra* note 27, at 268 (footnotes omitted).

[87] "The Soviet Union wants problems of environmental security to be discussed at the level of the Security Council, the United Nations' only body with the authority to

the "environmental tool" of the Security Council, the GRE could act with the authority of the Security Council. While participation in the GRE would be voluntary[88] and based primarily on the request of a sovereign state to assist in the clean-up of an environmental problem, an environmental disaster which crossed boundaries and threatened the environment of a Member State could be redressed by the Security Council in the same fashion as a military invasion.[89] The only difference would be the response action, performed by the GRE, and the purpose of that action would be rectifying the environmental problem, rather than opposing military force.

For environmental disasters, the response to the Iraqi invasion of Kuwait presents a model for cooperation, coordination and action. The importance of a rapid response is well-noted and efforts must be made to streamline communications and procedures to facilitate a remedy at a time when the costs may be minimized. In light of its unique mandate, and as the "environmental tool" of the Security Council, the GRE should be independent of UNEP.[90]

The actions of the GRE should indeed resemble the armed

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take [sic] decisions binding for States." Schevardnadse, *supra* note 8, at 23.

[88] "Theoretically, customary international law could reduce the problems hold-outs cause by creating rights and obligations for states that do not join the agreement." *Developments*, *supra* note 22, at 1537 (footnotes omitted).

[89] "In this connection, measures and procedures intended for military use could be combined with environmental control. This would make it possible to use simply and rationally the results of States' concerted efforts to save the planet from destruction." Schevardnadse, *supra* note 8, at 23.

[90] UNEP suffers from a difficulty faced by many international agencies. "UNEP, more promotional than operational, brings parties together and suggests programs, but does not always push them through to completion. Innovative and potentially efficacious initiatives, like the authority granted the Director to issue international alerts regarding global environmental threats, lie dormant." Gray, *supra* note 12, at 307-08 (footnotes omitted). The very nature of an emergency response entity is one of operation. Proposals do exist to enhance the authority of UNEP. These include, with regard to UNEP's "authority":

> primacy among international organizations in all environmental matters of global or regional significance . . . . [I]deally, UNEP would have the authority to declare, promulgate, and enforce principles of international environmental law. Possibly through a sub-body with Security Council-like powers to prosecute in the International Court of Justice, UNEP could apply sanctions, and even dispatch 'environmental police' . . .

Id. at 317. This scheme would turn UNEP into an entity closely resembling the United State Environmental Protection Agency (USEPA).

response to Iraq's invasion of Kuwait: The gravity of the problem demands it. The GRE would act as coordinator of operations, marshaling resources from Member States and dispatching response teams under the flag of the United Nations much as the U.N. peace-keeping forces now operate.

The GRE would handle the day-to-day operations, including the "ordinary" environmental disaster (those which do not pose a political question or require resources greater than currently available from the GRE). The sensitive political issues would be handled directly by the Security Council.

Each Member State and organization will initially put certain specific resources at the disposal of the GRE for use in case of environmental disaster. These resources should include: (a) communications facilities;[91] (b) personnel;[92] (c) training facilities; (d) specialized clean-up equipment; (e) transportation; and (f) scientific facilities. These resources will be maintained on a "ready to go" status, able to be summoned as needed. The GRE will catalogue and update the resources, including any provided and funded by the GRE itself.[93]

To aid in the recovery of response costs, each member State shall enact appropriate "polluter pays" measures. Liability for response costs, as mandated by both the Treaty enabling the GRE and the individual States' measures should be strict, joint and several, and allow for the recovery of costs and attorney's fees. Private polluters should be prosecuted, on behalf of the GRE,[94] by the Member State's environmental organization (e.g., USEPA), and State polluters should submit to jurisdiction before the International Court of Justice or an International En-

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[91] One key to the structure of an effective GRE is information processing and communications ability. The Soviets have proposed the launch of an international space laboratory or a manned orbiting station designed to monitor the state of the environment. *Environment: Center for Urgent Assistance Being Considered*, INTER PRESS SERV., Nov. 1, 1989. The information collected could then be dispersed to regional response centers and national environmental agencies through the GRE central facility.

[92] The same mechanism as is used in assembling a peace-keeping force can be used.

[93] The enormous expense of an adequate communications network, as well as state-of-the-art monitoring equipment, coupled with equipment to be maintained in readiness for a response action, requires the initial funding to be made on a global level by Member States.

[94] Legislative enactments in Member States should include provisions which give the GRE standing to sue in that State's courts.

vironmental Court.[95] All recoveries should be applied directly to the GRE for response actions.

As its legal basis the GRE should rely on a treaty similar to OPRC, which would involve the environmental protection organizations (e.g., USEPA) of each U.N. Member State. Similarly the GRE should incorporate regional entities (e.g., ROPME) into administrative regions for the purpose of managing localized problems.[96] National and regional environmental entities are the mechanisms for: (a) the request of assistance to the GRE during the advent of an environmental disaster in their jurisdiction; (b) access to the jurisdiction for GRE response operations; and (c) advocacy of the GRE's claims in the eventual attempt to recover the response costs from the entity responsible for the environmental disaster.

The national and regional environmental organizations will also be available to provide assistance during an environmental disaster, in providing pledged resources and technical expertise, as needed.

The result of the establishment of a GRE should be the existence of an institution which coordinates and manages responses to environmental disasters in an aggressive and competent manner. If such an institution were empowered by the U.N. Security Council, the potent combination of military prowess and environmental protection might be realized.

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[95] *See, e.g.*, The Honorable Amadeo Postigione, *A More Efficient International Law on the Environment and Setting Up an International Court for the Environment within the United Nations*, 20 ENVT'L L. 321 (1990).

[96] The regional centers would inventory the clean-up and rescue resources at their disposal and coordinate response actions with the regional states. Through this means a regional entity such as ROPME could act as the response entity for emergencies localized in that region.