

MAKING A DIFFERENCE



A NON-GOVERNMENTAL ORGANIZATION'S CAMPAIGN TO SAVE THE OZONE LAYER

Case Study of the Greenpeace Ozone Campaign

GREENPEACE

John Maté
Greenpeace International
Ozone & Greenfreeze Project Director

Front page photo:
USA, July 4, 1992:
50 activists march on beach with sign
"Ozone Destruction by Du Pont: No Day At the Beach"
while an airplane tows a banner reading
"Ozone: We Lose It, We All Burn"
Appendix A: E.1.5

For further information regarding the
Greenpeace International Ozone
and Greenfreeze Projects,
please contact:
John Maté,
Ozone & Greenfreeze Project Director,
phone: 1-604-253-7701
email: john.mate@yvr.greenpeace.org

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INTRODUCTION

“NGOs are no longer seen only as disseminators of information, but as shapers of policy and indispensable bridges between the general public and the intergovernmental processes” Kofi Annan, UN Secretary-General (1998)¹

There exists a delicate choreography between governments, multi-national corporations and Environmental Non-Governmental Organizations (ENGOs). At times this choreography is dramatically confrontational, and at times confrontation yields to collaboration.

The mandate of democratic governments is to balance and regulate civil society so as to ensure that maximum benefits accrues fairly to the population on the whole. In theory, democratic governments are to protect the common good from the deleterious effects of the activities of any one segment of society. In practice, however, governments often act in the service of the most powerful special interest group in society, that is the multinational corporations.

Multi-national corporations are mandated by their shareholders to maximize profits on investment. Protecting their business interests, multinationals expend vast resources to influence governmental policies to ensure that regulatory regimes designed to protect the public do not impinge on corporate profits.

Until recently, corporations were rarely held accountable for the impact of their corporate activities upon the environment. With the advent of global environmental non-governmental organizations (ENGOs), activities of corporations that may have injurious environmental impacts have come under greater scrutiny of the international public.

ENGO's are mandated by their supporters to protect the environment. They act as the watchdogs for the global commons — the oceans, lands and the atmosphere. They hold governments and corporations accountable.

Recognized for their public advocacy role, ENGO's have become increasingly accepted as legitimate “stakeholders” at multilateral governmental meetings that are held under the auspices of the United Nations Environment Programme. Governments have come to acknowledge that solutions to overwhelming global issues such as ozone layer depletion and climate change require the broadest possible participation of civil society, and that ENGO's with their grassroots outreach capabilities have at times greater capacity to engage the public than do governments.

The Montreal Protocol is the international agreement signed in 1987 to control ozone layer depleting substances. The Protocol has resulted in major reductions in



US, 1989:
Greenpeace climbers scale the Dupont water tower in Deepwater, New Jersey to award the company a “blue ribbon” for continuing to produce the largest quantity of ozone-destroying CFC's per year.
Appendix A: B.2.4

ozone depleting substances being emitted globally, and is therefore seen as the most successful international response to date to an environmental crisis.

The Parties to the Montreal Protocol meet annually. ENGOs are granted “observer” delegate status at Montreal Protocol meetings and at associated preparatory sub-committee meetings. This entitles them to intervene, at the discretion of the Chair, in the proceedings. It also provides ENGOs the opportunity to disseminate relevant literature, to engage in policy advocacy, to enter into collaborative projects with governments and implementing agencies and to glean first hand information from the formal sessions and through informal channels in the corridors of the meetings.

ENGO's are often the conduit of information between governments and the public, as well as between various stakeholders, such as governments, international agencies, and industry.

“ENGOs synthesise viewpoints, assemble, digest and process information into easily understandable problem definition and policy options. They also try to ensure transparency of the negotiation processes and demand accountability from negotiators.”²

The participation of ENGOs within the Montreal Protocol countervails, to a small degree, the inordinate influence that the multinational chemical corporations, the producers of ozone depleting substances, have been able to exert upon the regulatory regime of the Protocol. The multinational chemical companies maintain their influence through extensive public relations campaigns, well funded lobby initiatives, long term relationships with government administrators, historical business ties to manufacturers, and almost monopolistic sponsorship of experts who sit on the technical committees upon whose advice governments formulate policies.

Over 25 ENGOs have participated, at various times and to varying degrees, in the meetings of the Montreal Protocol since its inception in 1987. Many of these ENGOs made significant contributions, within the proceedings of the Protocol and in society at large, towards helping the world comprehend and respond to the global crises caused by ozone layer depletion.

The present paper is a case study of the activities of the Greenpeace Ozone Layer Protection Campaign. The paper describes in general terms Greenpeace's role in society and its campaigning rationale. It then examines the activities Greenpeace undertook to compel governments and industry to take more immediate and urgent action to eliminate the use of ozone depleting substances. These activities are examined under the following categories: (a) public outreach; (b) policy advocacy; (c) confronting the corporate producers of ozone depleting substances; and (d) market intervention with innovative solutions and through collaboration with like minded government agencies and companies.

GREENPEACE

Greenpeace is an international campaigning organisation that strives to be an uncompromising voice for the environment and a catalyst for ethical, political, commercial and technical change in society. Unencumbered by political compromises, and unshackled by financial dependence on corporate or governmental sources of funding, Greenpeace aims to articulate the "environmental imperative" on any given issue. Greenpeace campaigns put the spotlight on the causes of environmental degradation. They also identify viable solutions.

Greenpeace tackles global environmental issues which are caused by the activities of transnational corporations, or by those activities of governments (for example, nuclear testing and the transport of nuclear weapons and nuclear waste) that have international ramifications. Global environmental issues have local manifestations. Greenpeace campaigns bring global perspectives to local realities, and also reflect back into the international arena the local manifestations of a global problem.

Within the workings of multilateral agreements and in the public arena Greenpeace's role is: to countervail the influence of multinational corporations whose business activities are often at the root of global environmental problems, and who protect their vested interests by using their wealth and influence to undermine the intent of governments to regulate environmentally harmful corporate activities; and to create the political space for motivated governments, and to generate public and political pressure on reluctant governments, to initiate, implement and continuously strengthen regulatory regimes to protect the environment.

International Campaigning: Marketing Global Values

Global issues need global solutions. Greenpeace operates in over thirty countries. The international reach of Greenpeace, that is the ability of the organization to transnationally confront the perpetrators of massive environmental damage, and in a similar vein, the organization's ability to transnationally promote solutions, is the prime source of Greenpeace's strength and effectiveness in the world.

Greenpeace recognizes that the organization does not have the power to change society. At best, the organization can be a catalyst towards changing how society perceives issues. Changes in perception, thinking and values are seen as stepping stones towards changes in policies and practice.



Germany, 1989:
Greenpeace chartered ship renamed "Trojan Horse", with 250 activists in white radiation suits on board, docks at Hoechst plant on the Main River in Frankfurt. Activists climb on loading cranes with banner "Skin Cancer Has a Name: Hoechst". Action receives extensive national media coverage. Appendix A: B.2.1



Canada, 1990:
Greenpeace protests
outside Environment
Canada headquarters in
Hull, Québec.
Appendix A: C.1.2

Greenpeace campaigns are the vehicle by which the organization markets ecological and social “values”. Simply stated, the sum total of Greenpeace’s activities aim to bring about a world void of war, and a world where human civilization exists in greater harmony with nature.

What’s in a Brand Name

One of Greenpeace’s greatest assets is the organization’s name. It is an internationally recognized “brand name”, one that rivals in name recognition many of the largest corporations in the world. The effectiveness of the organization, the ability of the organization to gain access to offices of power in governments, media and industry is enormously enhanced by its name recognition.

Greenpeace’s influence is entirely dependent on the relatively high degree of public trust the organization receives world wide. Organizational integrity is the basis of public credibility. It is only through the publicly perceived integrity and trustworthiness of the organization that Greenpeace is able to compete against the far greater financial and political resources of corporations and governments for the “heart and mind” of the public .

On the whole public opinion favours non-governmental organizations like Greenpeace, and this provides NGO’s with sufficient clout to have, at minimum, access to decision makers, and at times to influence national and corporate policies.

According to one extensive international survey conducted in 2000 by Strategy One, a unit of Edelman Public Relations Worldwide, major “brand name ” non-governmental organizations (NGOs) such as Greenpeace, Amnesty International, Sierra Club, World Wildlife Fund “have earned a far greater level of trust than some of the most well-respected global multinational companies such as Ford, Microsoft, G-7 governments and global media”.³

The survey indicates:

NGOs are trusted nearly two to one to “do what is right” compared to government, media, or corporations. Nearly two-thirds of respondents say that corporations only care about profits, while well over half say that NGOs “represent values I believe in.”

NGOs ranked significantly higher as a source of credible information than media outlets or companies on issues including: labor and human rights; genetically modified food; and environmental and health issues.

The survey also found that NGOs have this greater level of trust because they more effectively use the power of images, particularly in broadcast and on the Internet. They speak directly to consumers, appealing to emotions through simple and concise themes.

Art of Campaigning

Greenpeace campaigns weave together a tapestry of scientific and technical research; moral and philosophical discourse and certitude; public outreach and information dissemination; non-violent direct actions and confrontations; media and public communication strategies; national policy advocacy; policy advocacy at Meeting of the Parties to Multilateral Agreements; corporate campaigning; and market interventions which combine technological innovations, collaboration with environmentally responsible companies, coupled with consumer advocacy.

The implementation of Greenpeace campaigns involves a fluid and dynamic interaction between careful planning, and spontaneous, opportunistic responses to changing circumstances. It is the full tapestry that constitutes a Greenpeace campaign. It is not possible to isolate any one component of a Greenpeace campaign from the other parts. Each part is reliant on all the others. The various components interact with and transform one another.

Solutions to global problems such as ozone layer depletion and climate change require action on local, regional, national and international levels. They require the establishment and implementation of legally binding multilateral agreements such as the Montreal Protocol to reduce and phase-out substances that deplete the ozone layer, and the Kyoto Protocol to reduce the global emissions of greenhouse gases. Solutions also require changes in national and local governmental policies and regulations, profound changes in multinational corporate business practices, technological changes in production and servicing of products, and changes in consumer awareness and behaviour. Greenpeace campaigns strive to address environmental issues on all those levels.

Precautionary Principle

Integral to Greenpeace campaigns is the “precautionary principle”⁴. The precautionary principle is a guideline for conducting human activity in a manner that is respectful of the basic axiom of ecology which states that everything is interconnected and if one factor is changed, all others are affected.⁵

One tenet of the precautionary principle is that no human activity should be conducted until it is proven that such activity is not harmful to the environment.



*Germany, 1988:
Greenpeace protests the
company's on-going
production of ozone
depleting substances at
the headquarters of the
chemical giant Hoechst
in Frankfurt/Main.*

Similarly, no substance should be released into the environment, and no technology should be applied, until it is proven to be environmentally benign. A corollary to this tenet is that no substance that during its life cycle (i.e. production, use, decomposition and disposal) will bio-accumulate toxins into the environment should ever be released.

A second tenet of the precautionary principle requires that “preventive action must take place even before conclusive scientific evidence exists regarding the cause and effect relationship of a potential harm to the environment.” Our present day ozone crisis is a vivid example of the failure of governments and industry to invoke a precautionary approach to the production and use of major ozone depleting substances such as CFCs, even after the first scientific warnings were issued in the early seventies that these substances may be dangerous to the ozone layer.

A third tenet is that the burden of proof regarding the safety of an activity, or the safety of any proposed technology, should rest with its proponents. A logical extension of this tenet is the polluter pays principle. This principle requires that the proponents of any activity or technology that proves to be harmful to the environment or to human health should be responsible for the full costs of repairing the damage.

The Art of Communication

Greenpeace’s effectiveness relies, to a large degree, on the organization’s communications strategy. Greenpeace catapults issues into public focus through creative and daring, non-violent “public confrontations with the perpetrators of environmental damage” which the mass media feels compelled to cover.

The primary motivation behind “direct actions” and “public confrontations” is to bear witness to an activity that is ethically and environmentally “wrong” and, when possible, to physically interfere with such activity through non-violent means. They give dramatic and symbolic representation to the public of the inherent conflict between the short term interests of the perpetrators of a damaging activity, and the long term ecological interests of the planet. They vividly dramatize an issue and compel society to wrestle with it on ethical, political, commercial and technological levels. Public confrontations thus democratize both the root causes and the solutions of an environmental problem.

Greenpeace is acutely cognizant of the fact that governments and corporations are vulnerable to public opinion. To negotiate with governments and corporations from a position of relative strength and power, Greenpeace has to repeatedly demonstrate that it is capable of communicating with the public, and when necessary to motivate the public to take action.

Greenpeace is equally cognizant of the fact that the public will only respond to a call to action when it is well informed; when the scientific, technical and moral perspectives are clearly delineated; and when people are empowered to take action through clear directions as to what they can do. Such actions may involve phoning politicians or offices of corporate CEOs; writing letters or emails to governments and corporations; signing petitions or sending post cards; writing letters to the editors

of newspapers and phoning open line talk shows; organizing information meetings in civic organizations or at work places; participating in protests; expressing one's opinion at the ballot box; taking corporate shareholders' initiatives; and through consumer power by not purchasing the products of a company that is seen to be environmentally irresponsible. The organization also engages in "cyber-activism", directing its supporters to send email messages to strategically targeted government and industry offices.

The degree of engagement of civil society in an environmental problem often determines the resources governments and industry are willing to commit to finding and implementing solutions. Traditionally the extent of coverage an issue receives in the mass media has been the primary gauge of public interest, and correspondingly, the primary indicator to governments and corporations of the extent of resources and attention the issue warrants.

In recent years, the advent of the Internet and the evolution of virtual-communities-of-interest has broken the mass media's monopoly on managing and reflecting the public's mind. Governments and corporations now need to keep their fingers on the public's pulse by monitoring both the mass media and the flow of information on the world wide web.

Greenpeace publishes well researched scientific, political/military and technical reports; produces audio-visual materials, such as videos and slide presentations; and has an extensive presence on the World Wide Web. These information modules form solid foundations for Greenpeace's moral appeal to society. Greenpeace communication materials are often targeted for selective audiences such as the general public, policy makers, science community, business community, the media. While the overall messages remain constant the material is tailored to communicate most effectively with the targeted audience.

Effective internal communication is integral to the cohesive functioning of an international organization like Greenpeace. Greenpeace makes use of an intranet — an internal computer based communications network referred to as "Greenlink". This intranet was established years before the advent of the public Internet. It enables the organization to effectively transfer and disseminate information around the



*Belgium, 1990:
Erecting a giant umbrella with a symbolic ozone hole, Greenpeace occupies ODS storage facilities of Boucquillon & Co in Deerlijk, Belgium.
Appendix A: C.2.3*

world, and to remain a primary source of current and up-to-date information for the public, the media and governments.

Greenlink also facilitates debate and the continuous exchange of ideas within the organization. It is an important tool for maintaining cohesion and the nurturing of an international culture and community within the organization. It is instrumental in the cross-cultural fertilization of campaign ideas, strategies and tactics. Often a tactic that works in one country is successfully repeated in other countries. This plays a crucial role in the organization's ability to mount internationally coordinated initiatives.

Greenpeace also makes use of an internal electronic media clipping service, "Greenbase". Greenbase informs the organization as to how issues relevant to respective campaigns are covered in the international mainstream press, and in trade journals. It also provides Greenpeace with reliable feedback as to the level of media coverage the campaigns are generating.

THE GREENPEACE OZONE CAMPAIGN: A CASE STUDY

From the mid-1980's until 1992, Greenpeace initiatives to protect the ozone layer were taken by national Greenpeace offices as extensions to existing broader campaigns, notably the atmosphere, chlorine and toxics campaigns. In 1992, ozone layer protection became the top priority Greenpeace campaign world wide. Greenpeace committed extensive resources to the campaign during the following four years, and made significant contributions to the global response to the ozone crisis. Greenpeace's most notable accomplishment was the introduction of Greenfreeze hydrocarbon technology in refrigeration. In 1996 the ozone campaign was merged with the climate campaign, and focus was directed on the global warming impacts of HFC substitutes to ozone depleting substances. Having gained expertise in non-fluorocarbon alternatives to CFCs with the ozone campaign, Greenpeace was well positioned to play a successful pivotal role in pushing to have HFCs included in the regulatory regime of the Kyoto Protocol (1997).



Applying the precautionary principle to the ozone crisis, the objective of the Greenpeace ozone campaign has been the earliest possible global phase-out of all ozone depleting substances (ODSs). Also consistent with the precautionary principle, Greenpeace has steadfastly opposed the replacement of the major ozone depleting substances, such as chlorofluorocarbons (CFCs), with second generation ozone depleting and global warming substances such as hydrochlorofluorocarbons (HCFCs), or with potent global warming substances, such as hydrofluorocarbons (HFCs).

All of the campaign's activities over the years have focused on convincing the world that there is an urgent environmental imperative to eradicate the use of all ODSs as soon as there are technologically proven and environmentally safer alternatives, and that such alternatives are indeed available in nearly all user sectors and applications.

The campaign pursued four broad streams of activities:

UK, 1992:
Greenpeace activists,
protesting the damage
to the ozone layer,
hang banner on House
of Lords at Palace of
Westminster.
Appendix A: E.1.2



Australia, 1991:
Action to warn the public about the dangers of ozone layer depletion at the Sydney Opera House. Greenpeace activists suspend a giant pair of inflatable sunglasses from the Opera House roof with the message "Stop it or we'll go blind."
Appendix A: C.1.1

- public outreach to generate demand on governments and corporations to take effective and immediate action to protect the ozone layer;
- policy advocacy to exert continuous pressure on governments to accelerate the ODS phase-out regime of the Montreal Protocol;
- confronting the producers of ozone depleting substances, the multinational chemical corporations;
- intervening in the market with environmentally safer, not-in-kind alternatives to the chemical industry's fluorocarbon substitutes to CFCs.

These four streams were intricately interconnected, flowing parallel to one another, ultimately merging into one campaign torrent.⁶

Public Outreach

The first challenge for the Greenpeace Ozone campaign was to inform the public about the urgency of ozone layer depletion, and to catalyze public outrage and demand for appropriate action from governments and corporations. The outreach involved the publication of reports⁷, brochures and leaflets; the production of information videos⁸; and through media savvy public protests.⁹

Greenpeace published a large volume of reports related to ozone layer protection. Nearly 80 reports were written in English, many of which were translated around the world. In addition, country specific reports were published in other languages.

Greenpeace reports translate scientific data into easily accessible popular language. They focus on the dangers to human health and the biosphere and the massive financial costs to society from increased UV radiation reaching the earth's surface.¹⁰ The reports highlight the necessity and the capacity of governments and corporations to do much more than what they are willing to do to protect the ozone layer, and the global climate. They advocate policies for the radical acceleration of the ODS phase-out regime of the Montreal Protocol.¹¹ They document in detail the role of the multinational chemical corporations in causing and prolonging the problem of ozone depletion and expose the environmental dangers of the fluorocarbon solutions that the chemical industry is promoting to address the ozone crisis.¹² They critique the cozy relationship between governments and the multinational chemical corporations.¹³ They also present environmentally safer and technologically viable alternatives to fluorocarbons in all industrial sectors.¹⁴

Policy Advocacy

Parallel to the public outreach, the corporate campaigning and the solutions work, the Greenpeace ozone campaign took specific initiatives to influence government policies on national levels and within the context of multilateral agreements, i.e. the Montreal and Kyoto Protocols.

It is difficult to gauge the degree of success the organization has had in shaping national policies, or the concrete influence Greenpeace has had through the organization's participation in the Montreal Protocol. Governments rarely wish to credit non-governmental organizations with influencing government policies. Seldom is it possible to draw a direct cause-and-effect relationship between Greenpeace's campaign activities and demands and governmental policy shifts. Such a relationship can only be drawn by inference.

Greenpeace continuously articulates the environmental imperative for governments to rapidly eradicate the use of all ozone depleting substances without allowing the wide scale usage of other environmentally harmful substances such as HCFCs and HFCs.

The organization has also been consistent in advocating for:

- radical increases in the amount of money industrialized countries contribute to the Multilateral Fund of the Montreal Protocol, to enable developing countries phase-out the use of all ODSs at a much faster pace than is presently scheduled under the terms of the Protocol;
- agreement from developing countries to accelerate the phase-out of CFCs and all other ozone depleting substances;
- agreement from developing countries to bypass the use of temporary HCFC and HFC substitutes in favour of long term sustainable alternatives to CFCs;
- substantial increases in funding for the scientific investigation of the impacts of increased UV radiation reaching the surface of the earth;
- a zero tolerance policy towards new ozone depleting substances that are entering the market.;
- governments to seek reparation payments from the multinational chemical corporations for the damage that their products have caused to the ozone layer; and
- governments to enter into legally binding contracts with multinational chemical corporations committing industry to pay full reparations for any and all human health and environmental damages resulting from the global use of HFCs.



Canada, 1992:
Greenpeace hangs the banner, "Seagram / DuPont = Profits from Ozone Destruction" at Seagram's annual meeting. Seagram's owned 24.5 of Du Pont shares. Protest leads to Greenpeace addressing shareholders at the company's invitation.
Appendix A: E.2.3



UK, 1992:
80 GP activists wearing white suits, sunscreen and sunglasses with signs stating "ICI Still Destroying the Ozone Layer" sit in front of Royal Lancaster Hotel in London, where ICI is holding its shareholders' AGM. Inside AGM, Greenpeace representatives play tape pre-recorded messages in "talking briefcases" on ozone damage, health effects and ICI's ODS production.
Appendix A: E.2.8

Greenpeace attends the Meetings of the Parties to the Montreal Protocol, and associated technical and preparatory meetings, such as the Open Ended Working Group of the Montreal Protocol and the Executive Committee of the Multilateral Fund. Greenpeace routinely distributes scientific and technical reports and policy position papers at these meetings. The organization also makes interventions and gives presentations during the proceedings. In addition, national Greenpeace offices pursue policy advocacy work with their own respective governments.

Greenpeace's interventions and presentations at these meetings often catalyze further discussions among the Parties, and serve to crystalize or punctuate the environmental perspective on any given issue.

Perhaps the campaign's most visible accomplishment in the area of policy advocacy was the organization's success in having HFCs included in the Kyoto Protocol.

Confronting the ODS Producers

Greenpeace primarily holds the multinational chemical corporations responsible for today's ozone crisis. From the beginning of the ozone campaign Greenpeace confronted the global chemical industry with three basic demands:

- stop producing ozone depleting substances such as chlorofluorocarbons (CFCs) immediately;
- do not replace CFCs with second generation ozone depleting substances, such as HCFCs, or potent greenhouse gases, such as HFCs;
- take responsibility for the damage that your ODS products have caused to human health and the environment in the form of reparation payments.

These demands are put forth through all the means available to Greenpeace: information dissemination, media strategies, public confrontations, legal challenges, policy advocacy on national levels and within the Montreal and Kyoto Protocols, and through market interventions.

According to Greenpeace the core strategy of the chemical industry is to hold on to the global monopoly the industry achieved with CFCs in various industrial sectors. "Since the signing of the Montreal Protocol, the industry has steered the international community towards the wide scale use of hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs) as replacements for CFCs. These products are patented by the chemical industry, and the industry maintains full control over production, supply and pricing. As long as non-in-kind alternatives could be prevented from entering the market, the industry's global monopoly would be safeguarded."¹⁵

Greenpeace maintains that the ODS phase-out regime of the Montreal Protocol is

largely dictated by the interests of the multinational chemical corporations who have managed to essentially “hijack” the Protocol. According to Greenpeace, these corporations obstructed the establishment of an international regulatory regime for CFCs and other ozone depleting substances until they were assured of being able to control the global market with their replacement substances. The organization found support for this perspective in a June 30, 1990 quote in the *New Scientist*, from Dr. Mustafa Tolba, former head of the UN Environment Programme: “...the chemical industry supported the Montreal Protocol in 1987 because it set up a worldwide schedule for phasing out CFCs, which [were] no longer protected by patents. This provided companies with an equal opportunity to market new, more profitable compounds.”



France, 1994:
Greenpeace activists confiscate canisters containing ozone destroying substances from the company DEHON and load them into a truck with the intention of returning them to the company they came from, ATOCHEM.
Appendix A: G.2.2

Greenpeace maintains that the actual ODS phase out regime of the Montreal Protocol reflects a profit driven corporate time table at the expense of the ozone layer and the global climate. The organization points to a December 1, 1992 article in the *London Financial Times* which reported that Du Pont had invested \$450 million in HCFC and HFC production, and expects to hit the \$1 billion mark in 1995, with an expected recovery period for the investment of no less than ten years. The company claimed to require another ten to twenty years of HCFC and HFC production to profit above and beyond recouping their investment.

For Greenpeace, the business driven nature of the phase-out regime is confirmed by an intervention of the United States at the 15th Meeting of the Open-Ended Working Group (June, 1997), regarding a European Union proposal for an earlier phase-out for HCFCs in industrialized countries: “We believe one of the keys to the success of the Montreal Protocol has been our constructive partnership with industry. Less than 10 years ago we asked industry to develop and commercialize substitutes for CFCs to enable the expeditious phase out of these substances. We all agreed a reduction schedule that would enable them to recoup their investments. By continuing to restrict the schedule further, we are taking away their ability to do that — in effect, punishing them for their bold early decision to convert to substances with a lower ODP...”¹⁶

Various Greenpeace reports expose the obstructive role the chemical industry initially played in international efforts to establish and implement regulations for the control and phase-out of ozone depleting substances. They critique the activities of these corporations as being self-serving, and solely profit driven.

- On the occasion of the 10th Anniversary Meeting of the Montreal Protocol in 1997, where the chemical industry is awarded the UNEP Ozone Award, Greenpeace writes: “Given the responsibility of the chemical industry for the ozone crisis, given that much of this industry continues to profit magnificently from ODS production, and given that this industry has to this day failed to accept its full responsibility for



This Greenpeace commissioned cartoon, depicting the chemical industry's damage to the planet through the marketing of fluorocarbons, has been reprinted by the organization in several reports, as well as on campaign buttons.

the crisis by paying any form of reparations, it is a mockery that the industry lobby group, the Alliance for a Responsible (CFC) Atmospheric Policy is to receive the 1997 UNEP Ozone Award, or that in the past corporations such as Du Pont, ICI, Allied Signal and the Alliance itself received the US EPA's Stratospheric Ozone Protection Awards. Isn't that analogous to the tobacco industry receiving an award from the World Health Organization for the industry's contributions to the 'prevention' of lung cancer?"¹⁷

- A 1995 Greenpeace report, "No Excuses", which surveys the availability of CFC/HCFC/HFC-free technologies on the market, writes: "Chemical corporations, that created the ozone crisis in the first place, promote the false-perception that at the present time only their products, hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs), are available as viable alternatives to CFCs. Led by such giants as Du Pont, ICI and Elf Atochem, they are striving to maintain a multi-billion dollar global monopoly they have enjoyed with CFCs during the past six decades."¹⁸

- A 1997 Greenpeace International position paper, writes: "The most alarming aspect of both the ozone and the climate crisis has been the attitude of the multinationals whose products and drive for profit have brought about the crises in the first place. The strategy of both the chemical and the fossil fuel industry in dealing with the crises can be summarized by the four D's: deny, delay, dominate & dump. (1) DENY that there is a problem, and that you and your products have any responsibility; (2) DELAY effective national and international regulatory action that might negatively impact upon your profits; (3) DOMINATE the public debate, governments' responses, and most importantly, the market place; and (4) whenever possible, DUMP your obsolete technologies in the vulnerable markets of developing countries to extract further profit."¹⁹

- The organization repeatedly calls for reparation payments to be made on the part of the chemical companies to help repair the damage their products have caused globally. Greenpeace has also suggested that the chemical industry is perhaps libel, or vulnerable to class action suits, for the vigorous global marketing of ozone depleting substances beyond the point where there was credible scientific evidence regarding the deleterious impacts of these substances upon the environment: "A rough estimate would indicate that the global health costs arising from increased UV radiation could be between 400 and 3200 billion US dollars. This does not take into account additional damages from increased UV radiation to crops, livestock, forests, building materials, wildlife and so forth. Why is it that the chemical corporations that continued to vigorously market ozone depleting substances, even after they were fully cognizant of the damage that their products were having upon our common heritage, the ozone layer, have never been held legally and financially accountable by the governments through global or national class action suits?"²⁰

"In a precedent setting agreement in 1990, the Parties to the Montreal Protocol established the Multilateral Fund to assist Article 5 or developing countries phase-out the use of ozone depleting substances (ODSs). The Multilateral Fund embraces the very important "polluter pays principle"...but only partially so. To date, only the taxpayers of Article 2 countries have contributed to the Fund. Meanwhile, the real polluters, the multinational

chemical corporations who created the ozone crisis in the first place with their careless disregard of the early warning signs, have yet to pay a penny to help repair the damage that their products have inflicted upon the ozone layer. They are quite content to let the taxpayers clean up their mess."²¹



- Greenpeace reports also pin point which companies profited the most from the ongoing production of ozone depleting substances. In a 1995 report "The Ozone Layer Destroyers: Whose Chlorine and Bromine Is It", Greenpeace writes: *"Chemical companies have dictated the progress of the Montreal Protocol and measures to protect the ozone layer. In doing so, they have been able to switch from making money from CFCs to making money from CFC replacements. For these companies, the ozone hole has been a gold mine. The ozone crisis has meant a change to new products selling at premium prices. It has meant investments in new plants and revitalised market activity....If each atom of ozone destroying chlorine and bromine was marked with the logo of the company that profited from its production, more than half the sky would be covered with the logos of DuPont, Elf-Atochem, ICI, Great Lakes Chemical, Dead Sea Bromide, Daikin and Solvay. In our view, it is time the chemical companies are made to pay a share of the cost of repairing ozone damage.*"²²
- In its reports, Greenpeace repeatedly lambastes the tendency of governments to accept at face value the self-serving, profit generating recommendations of the chemical industry for ODS replacement technologies, without giving equal consideration to non-fluorocarbon based alternative technologies. Similar criticism is leveled at the Executive Committee of the Montreal Protocol Multilateral Fund and its Implementing Agencies (World Bank, UNDP, UNIDO). Greenpeace also critiques the prominent over-representative role of the chemical industry in the technical options committees of the Montreal Protocol, and in regulatory safety standards committees: *"The chemical industry has extensive representation on the various technical sub-committees of the Montreal Protocol, and consequently exerts powerful influence over the frame of reference and the decisions of the Parties to the Protocol. In essence, the chemical industry has hijacked the Montreal Protocol."*²³
- In a 1999 submission to a joint investigation by the Kyoto and Montreal Protocols on how to limit HFC emissions, Greenpeace warns against the infiltration of the review process by the proponents of fluorocarbons: *"Full disclosure of corporate affiliation of all technical experts and consultants working for the Montreal and Kyoto Protocols needed: The Parties to the Montreal and Kyoto Protocol should ensure that they are receiving objective opinions in their investigation of alternative technologies to HFCs/PFCs and SF6. An over-representation in the HFC/PFC/SF6 review process by the fluorocarbon industry will hinder the ability of the Parties to accurately gauge the feasibility of not-in-kind alternatives. It is unrealistic to expect that the chemical corporations, with their vast resources, will not attempt to steer the review process*

US, 1992:
Greenpeace activists protest in front of the NASA building in Washington, DC, outside the press conference at which NASA officials revealed that ozone depletion in the Earth's atmosphere is more severe than previously thought.
Appendix A: E.2.10



Germany, 1992:
Pretending to be a
tourist group,
Greenpeace buses 120
people into the Kale
Chemi plant near
Hannover. Activists
block trucks and tanks
and hang banner "Here
In this Romantic Place
Starts Ozone Damage".
200 police are called
resulting in extensive
media coverage.
Appendix A: C.2.1

if it did not suit their corporate interests."²⁴

Words Without Actions = Nothing

The Greenpeace Ozone Campaign manifested numerous public confrontations with the corporate producers of ozone depleting substances.

The strategic rationale for public confrontations with the chemical corporations include:

- to publicly identify which companies are profiting from the production of ozone depleting substances at the expense of the common good;
- to publicly stigmatize and vilify these companies so as to create, when possible, market pressures on their products, and internal debate among their shareholders and Board of Directors in the expectation of bringing about positive changes in their business practices;
- to counteract the influence these companies exert over national governments and within the proceedings of the Montreal Protocol;
- to discourage governments and user industries in both industrialized and developing countries from accepting at face value the information and the new CFC-replacement fluorocarbon product lines that the chemical industry was vigorously marketing; and
- to encourage competing companies to enter the market with environmentally safer products.

The largest corporate producers of ozone depleting substances were targeted in Europe and North America. Du Pont, ICI, Hoechst, Elf Atochem, among others, were hit with high profile protests. These included banner hangings; occupation of loading cranes and company plants; blockading of roads, railroad lines and loading docks at production facilities; protests at shareholder AGMs; billboard campaigns; legal challenges; consumer mobilization.²⁵

towards the full endorsement of their products. The chemical manufacturers and their corporate allies, for example, are over represented in the composition of the Technology and Economic Assessment Panel (TEAP). Notwithstanding the "professional oath of objectivity" taken by all TEAP participants, it is doubtful that these chemical industry representatives will recommend any course of action, or technology, which may adversely affect the interests of the companies that pay their salaries, pensions and all of the expenses connected with their participation in TEAP. Nor is it realistic to expect that the chemical companies would pay for the participation of their employees in TEAP

Market Intervention: Solutions Campaigning

Every campaign involves a dialectic between opponents. The Greenpeace ozone campaign was vociferous in its criticism of the role that the multinational chemical companies played in causing and prolonging the ozone crisis. The organization was unequivocal in its opposition to the use of HCFCs and HFCs as replacements for CFCs. The chemical companies responded to protect their corporate image and their HCFCs/HFC products by criticizing Greenpeace.

- A Du Pont newsletter, written in 1990 but circulated as late as 1992, ridicules those, like Greenpeace, who are calling for an immediate ban on ozone depleting substances such as CFCs and HCFCs: "We certainly have the option of no longer refrigerating our food supply, 75% of which is refrigerated as it is harvested, processed, stored, distributed or served. Are we prepared to be totally dependent on food that is consumed as soon as it is harvested? Or food that is dry, canned, smoked, salted or pickled to prevent spoilage?" The newsletter then asserts that for "...40% of the CFC market, largely refrigeration, no completely environmentally neutral alternative has yet been developed, nor is any likely in the near future."
- Hoechst, in 1991, distributes millions of leaflets in Germany stating that Greenpeace is endangering the lives of children all over the world by opposing refrigerant substances necessary for refrigeration and for the food chain.
- ICI in 1991 writes to UK GP supporters: "Can we all go back to the laboratory and spend the next ten years working on Greenpeace ideas to see if they can be made to work in practice? Greenpeace have refused to join in any discussions of what might actually be done about the problem in a practical way. After all it is so much easier to stand on the sidelines and criticise." And in 1992, a high level ICI representative is quoted as saying: "Greenpeace lacks a sense of urgency. Most alternatives it talks about are not available. They're either pie in the sky or will only be feasible next century. Our alternatives are available now."

Early in the campaign Greenpeace recognized that to oppose the chemical industry's agenda for the world wide substitution of CFCs with HCFCs and HFCs, the organization would need to demonstrate that environmentally safer, and technologically reliable alternatives were indeed available. The organization researched



Germany, 1991 and US, 1992: Greenpeace billboard campaigns feature the CEO's of chemical companies. Appendix A: D.1.1 and E.2.11



Germany, 1992:
First generation of
Greenfreeze. Greenpeace
initiative results in the
development of ozone
and climate friendly
domestic refrigerator
that use hydrocarbons
as foam blowing agents
and as refrigerants.
Appendix A: E.3

1997:
Greenpeace receives
UNEP Ozone Protection
Award for the develop-
ment of Greenfreeze.
Appendix A: J.1.2

the existence of such not-in-kind alternatives, and over the years published several surveys listing the producers and the users of non-fluorocarbon technologies in various sectors: refrigeration, domestic and commercial air-conditioning, transport cooling, foam production, solvents.²⁶

Greenpeace took further initiatives to promote not in-kind-alternatives. In October, 1993, Greenpeace organized the “Ozone Safe Cooling Conference” in Washington, D.C. to investigate practical alternatives to fluorocarbons in cooling technologies. Dozens of papers by up to 40 speakers from Europe and North America were presented. The proceedings were published in book format.²⁷ In 1995 Greenpeace published a detailed technical report, “Back to The Future” comparing fluorocarbons and hydrocarbons in domestic refrigeration.²⁸ In 1998 Greenpeace co-produced a technical training video with UNEP and GTZ, under the same name.²⁹ In 1999, Greenpeace produced a video entitled “Cool Technologies: Working Without HFCs”. Shot in ten countries, “Cool Technologies” surveys the application of HFC-free cooling technologies in hospitals, office buildings, super markets, mobile air-conditioning, domestic and commercial refrigeration.

Greenfreeze: Revolutionizing the Global Refrigeration Industry

The most profound market intervention initiative of the Greenpeace Ozone Campaign was the development and the successful commercialization of ‘Greenfreeze’ hydrocarbon technology in domestic refrigeration.³⁰

The search for not-in-kind alternative technologies. in refrigeration prompted the organization to keep an open eye for emerging technologies. Applying the pre-cautionary principle, the organization became convinced that the future of environmentally safer refrigeration was with natural substances, such as hydrocarbons, CO₂, ammonia, water, air.³¹

Learning about earlier experiments with hydrocarbon refrigerants that had been conducted at Germany’s Dortmund Institute, in 1992 Greenpeace Germany initiated the commercial development of a hydrocarbon domestic refrigerator by bringing together Dortmund scientists with the fridge manufacturer, DKK Scharfenstein. The goal was to produce a prototype of a fridge without fluorocarbons.³²

Within one year this initiative resulted in the highly successful commercialisation of “Greenfreeze” hydrocarbon refrigeration in Germany. The technology rapidly spread to other European countries, and soon Greenfreeze revolutionised the refrigerator industry world-wide.

The major technological obstacle to the industrial use of hydrocarbons is their flam-

mability. Greenpeace notes that flammability risk factor of hydrocarbons are over emphasized by commercial competitors, the producers of HCFCs and HFCs. *"The flammability of hydrocarbons can be mitigated through adequate safety measures in production and product design."*³³

Since 1992, hydrocarbon refrigeration, or Greenfreeze, has increasingly penetrated the domestic markets in Western Europe. There are over 55 million Greenfreeze refrigerators in the world today. Greenfreeze represented 35% of Western European production in 1996. By 1999, 100% of German industry had converted to hydrocarbon technology. By 2001, outside of Europe, hydrocarbons were used, or were soon to be used, as refrigerants in domestic refrigerators in Argentina, Australia, Brasil, China, Cuba, Indonesia, Japan. The use of hydrocarbons as insulation foam propellants is widely accepted, including in some markets where there is still resistance to using them as refrigerants



Greenfreeze provided Greenpeace with new opportunities to address the issues facing developing countries. The key challenge for developing countries is to elevate the standard of living of their citizens through industrialization, without exacerbating such environmental calamities as ozone layer depletion and climate change. Greenpeace has repeatedly conveyed to developing countries that besides its environmental benefits, Greenfreeze also offers technological and financial benefits such as, independence in supply of non-patented foaming agents and refrigerants; lower operating costs for foaming agents, refrigerants and lubricants ; and easier maintenance and servicing than with HFC technology.

Hydrocarbon technology in refrigeration has not yet penetrated the North American market. Greenpeace maintains that the chemical industry is using its influence to obstruct the introduction of hydrocarbon refrigeration technology in United States and Canada in order to limit competition.

The development and rapid market acceptance of Greenfreeze in domestic refrigeration had a profound impact on industry, on governments and on Greenpeace itself. Corporations and governments were compelled to accept Greenpeace as a credible voice on technical and commercial issues. Greenpeace emerged as a force to be reckoned with within the commercial world. The organization demonstrated that it has the skills to intervene in the market.

The success of Greenfreze also changed how Greenpeace perceived its role in society. Providing practical solutions to environmental problems henceforth became an

*China, 2000:
Modern, no-frost hydrocarbon refrigerators by Kelon company of China on display at the 12th Meeting of the Parties to the Montreal Protocol, in Beijing.*

There are more than 55 million hydrocarbon refrigerators in the world today.



Australia, 2000:
Greenpeace Sydney Olympics campaign targets major Olympic sponsors, Coca Cola and McDonald's, demanding that these corporations live up to the Environmental Guidelines of the Sydney 2000 Olympics, which call for CFC, HCFC and HFC-free technologies. Greenpeace launches a global internet campaign. Major sponsors make commitments to go HFC-free by the 2004 Olympic Games in Athens.
Appendix C

integral part of many other Greenpeace campaigns.

Bringing Greenfreeze to Coca Cola and McDonald's

The second phase of the Greenfreeze initiative, launched in 1993, was to convince the large commercial users of refrigeration and air-conditioning equipment to shift away from fluorocarbons. The campaign initially focused on European supermarkets.³⁴ A number of supermarkets responded to the Greenpeace's campaign by deciding to shift from fluorocarbon refrigeration and cooling to "natural refrigerants" such as hydrocarbons and ammonia.

In 1998 the campaign turned its attention to the major corporate sponsors of the 2000 Sydney Olympics, that is the giant food and beverage companies such as Coca Cola, McDonald's and Unilever, whose daily operations utilize millions of refrigeration units world wide.³⁵

The campaign escalated in 2000 as the opening date of the Sydney Olympics rapidly approached. Greenpeace published a stinging report "Green Olympics, Dirty Sponsors".³⁶ The report attacked the major sponsors for violating the spirit and the Environmental Guidelines of the "Green Olympics" through their use of HFCs in cooling equipment. The report was followed-up with a high profile internet campaign, and public protests aimed at Coca Cola.

The campaign achieved its goals much sooner than expected. On June 28 Coca Cola announced plans to globally phase-out the use of hydrofluorocarbons (HFCs) in refrigeration by the Athens Olympic Games in 2004. Coca Cola also announced its intention to expand research into refrigeration alternatives. The Coca Cola announcement was soon followed by similar commitments from McDonald's and Unilever.

These developments sent shock waves through the global refrigeration industry, rattled the confidence of the chemical companies in the future of their fluorocarbon refrigerants and blowing agents, and was acknowledged as being very significant developments by delegates in the corridors of the Montreal Protocol.

Greenpeace views these developments as the highest and most enduring achievements of the Sydney 2000 Olympics.³⁷ The organization now points to the commitments of these companies as positive examples of corporate environmental responsibility.³⁸

Collaboration

Greenpeace is pragmatic in its advancement of campaign goals. Whereas the organization perceives non-violent confrontation as a viable tactic to put spotlight on an environmental problem, Greenpeace also sees collaboration as a viable means to promote solutions. The Greenpeace Ozone Campaign offers several examples where Greenpeace chose to collaborate with governments, corporations, and other organizations. At times collaboration follows intense confrontations.

- 1991: In Germany confrontations between Greenpeace and chemical company Hoechst over the company's production of CFCs and HCFCs eventually resulted in the company deciding to accelerate its phase out of production of ozone depleting substances, and Greenpeace publicly declaring the company to be an industry leader.
- 1993: Initially the large refrigerator manufacturers like Liebherr and Bosch were antagonistic towards the Greenpeace inspired hydrocarbon refrigerator. Once these companies switch to hydrocarbon technology, Greenpeace collaborates with them to promote the technology domestically as well as in other countries.
- 1993: Greenpeace acts as a facilitator in a deal between GTZ, Liebherr and Haier company for the production of Greenfreeze in China.
- 1994: Greenpeace co-operates with Britain's largest LPG producer Calor Gas around the company's launch of a new class of hydrocarbon-blend CARE refrigerants. Having a common goal to promote hydrocarbon refrigerants, the co-operation is maintained through information sharing, and participation in relevant technical conferences.
- 1994: Agreement is reached between Greenpeace and Bosch-Denmark to place a label on Bosch's hydrocarbon refrigerators stating "Greenfreeze technology as recommended by Greenpeace" and to include a message from Greenpeace in a special box on the front page of Bosch's refrigerator brochures.
- 1997: Greenpeace collaborates with Cuba, Germany, UNDP and Global Environmental Fund (GEF) to convert Cuba's refrigerator factory (INPUD) from CFCs to hydrocarbons. To further assist Cuba's capacity to produce its own hydrocarbon refrigerants, Greenpeace facilitates the visit of Cuban scientists to Canada in 1999, leading to the procurement of Canadian gas purification technology for Cuba with the support of the governments of Canada and Germany.
- 1997: Greenpeace participates, at the invitation of the Danish EPA, in the steering group of a Danish Technical Institute project to write a report on "Substitution for strong greenhouse gases: HFCs, PFCs and SF6". Report becomes the basis of government policy and eventually leads to a 2006 phase-out schedule for these gases.
- 1998: Greenpeace International, GTZ and UNEP co-produce a technical video

and training booklet entitled "Back to the Future: Working Safely With Hydrocarbons in Refrigeration". Video and booklet are translated into all UN languages and distributed world wide.

- 1998: Greenpeace publicly welcomes the launch of the new KYOTO brand Greenfreeze range of domestic refrigerators and freezers by the large food retailer Iceland Frozen Foods, and agrees to Iceland using Greenpeace's logo on advertising material for Greenfreeze refrigerators with a notation: "Greenpeace endorsed technology at high street prices."
- 2000: Following a hard hitting campaign against Coca Cola and McDonald's for their use of HFCs in refrigeration equipment around the world and at the Sydney 2000 Olympic Games, Greenpeace publicly acknowledges these companies for their "corporate environmental leadership" when they commit to phasing out their use of HFCs by 2004.

SUMMARY

The ozone campaign has met many of its objectives. It has been effective in communicating to the public the urgency of the problem caused by ozone layer depletion. It has repeatedly confronted, through high profile actions and protests, the multinational chemical corporations that produce ozone depleting substances. It has inarguably influenced government policies at national levels, and has effectively presented its positions within the Montreal and Kyoto Protocols.

The campaign demonstrates that governments and industry respond to public pressure generated by Greenpeace. Conversely, they are less likely to make needed changes without such pressure. This is vividly demonstrated by events in Argentina. While the Argentinean Greenpeace ozone campaign was in high gear several refrigerator manufacturers made commitments to move away from fluorocarbons. Since the campaign wound down in 1996 little further progress has been made.

The campaign achieved phenomenal success with its market intervention strategies, having inspired a technological revolution in the global refrigeration sector. The campaign has also succeeded in convincing some of the largest corporations in the world, such as Coca Cola and McDonald's, to make fundamental changes in the type of cooling equipment they will purchase in the future.

Greenpeace's financial resources are infinitesimal in comparison to those of multinational corporations and governments. The ozone campaign demonstrates that through intelligent and reliable research, strategic timing and well-targeted initiatives, creative public confrontations and outreach, effective market intervention and strategic collaborations, the organization is able to be a catalyst for positive change in the world.

The ozone campaign has also expanded the way society perceives Greenpeace, as well as the expectations the organization has of itself. Though the primary objective of the campaign, that is the elimination of the use of ozone layer depleting and global warming industrial substances have not yet been achieved, the campaign can take satisfaction in knowing that it has made a significant difference.

APPENDIX A

Greenpeace Ozone Campaign Activities

Representative sampling of Greenpeace campaign activities organized in a chronological order in the following categories: Public Outreach & Policy Advocacy, Confronting Corporate ODS Producers and Market Intervention Solutions Campaigning.*

A. 1986

A.1 Confronting Corporate ODS Producers (1986)

- A.1.1 Germany: Greenpeace campaigns against Hoechst Company's use of CFCs in aerosol cans by sticking "Environmental Devil" labels on CFC tanks. This is in contrast to the German EPA's prestigious "Environmental Angel" designation.
- A.1.2 Luxembourg: Greenpeace dumps 2200 aerosol cans inside the building of the Ministry of Technology and Employment, to vividly demonstrate the amount of CFCs a proposed Du Pont TYVEK plant will emit each hour, and to demand that the government deny the necessary permits for the plant. Greenpeace maintains its opposition to the Du Pont plant's activities over a fifteen-year period.

B.1989

B.1 Public Outreach and Policy Advocacy (1989)

- B.1.1 Greenpeace International organizes protest outside 1st Meeting of the Parties to the Montreal Protocol in Helsinki, Finland, floating a banner "Our Lives Are in Your Hands" with helium balloons to the top of the flagpoles outside conference center. Activists arrested for defaming the Finnish flag, are able to give media interviews from jail via mobile phones, calling for urgent action on the part of governments to protect the ozone layer. Greenpeace brings young Australian victim of UV radiation to conference.

B.2 Confronting Corporate ODS Producers (1989)

- B.2.1 Germany: Greenpeace chartered ship renamed "Trojan Horse", with 250 activists in white radiation suits on board, docks at Hoechst plant on the Main River in Frankfurt. Activists climb on loading cranes with banner "Skin Cancer Has a Name: Hoechst". Extensive national media coverage.
- B.2.2 Luxembourg: In the eve of the national holiday (the Grand Duke's birthday), Greenpeace Luxembourg hangs a huge banner, saying "DuPont Ozone Killer No 1 in Luxembourg and Worldwide — Greenpeace", under a bridge in the centre of Luxembourg City.
- B.2.3 Canada: Greenpeace climbers hang a banner from a water tower at the Du Pont facility in Maitland, Ontario to protest the continued manufacture of ozone destroying CFC's by Du Pont.
- B.2.4 USA: August 29, 1989: Greenpeace climbers scaled the Du Pont water tower in Deepwater, New Jersey to award the (Wilmington, DE based) company a giant "Blue Ribbon" on which was written below the very visible Du Pont logo : #1 Ozone Destruction. The company was awarded the ribbon for continuing to produce the largest quantity of ozone-destroying CFC's per year.

*This sampling is not all inclusive of all the initiatives taken world wide by Greenpeace to protect the ozone layer.

The acronym "GPI" refers to Greenpeace International.

C. 1990

C.1 Public Outreach & Policy Advocacy (1990)

- C.1.1 Australia: Greenpeace activists suspend a giant pair of inflatable sunglasses from roof of Sidney Opera House with the message "Ozone Depletion: Stop It or We'll All Go Blind", while other activist wearing zinc cream sun hats and sunglasses shelter from the sun under umbrellas stand in the forecourt below with a similar banner.
- C.1.2 Canada: Demanding an end to CFC use, Greenpeace activists block entrance to Environment Canada headquarters in Hull, Quebec with dozens of used CFC refrigerators.
- C.1.3 USA: Greenpeace holds protests at 10 regional US EPA offices to demand more extensive public information be provided regarding ozone depletion and the dangers of increased UV radiation.
- C.1.4 At the 2nd Meeting of the Parties to the Montreal Protocol in London, Greenpeace distributes a report: "The Failure of the Montreal Protocol: 50% More Production", offering a concise critique of the Montreal Protocol phase-out regime, the failure of the Montreal Protocol to halt the growth in ODS production, and a warning against the use of potent greenhouse gas substitutes for ODSs.

C.2 Confronting Corporate ODS Producers (1990)

- C.2.1 Germany: Pretending to be a tourist group in 4 buses, Greenpeace buses 120 people into the Kale Chemi plant near Hannover. Activists block trucks and tanks and hang banner "Here In this Romantic Place Starts Ozone Damage". 200 police are called resulting in extensive media coverage.
- C.2.2 Germany: Highlighting the hypocrisy of a pharmaceutical company marketing health endangering CFCs, Greenpeace Germany publishes a comprehensive list of Hoechst's pharmaceutical products and their competitor's alternative products on the market. List is mailed to every doctor and hospital in Germany resulting in a huge response from the medical community and extensive media coverage.
- C.2.3: Belgium: Erecting a giant umbrella with a symbolic ozone hole Greenpeace occupies ODS storage facilities of Boucquillon&Co in Deerlijk.

D. 1991

D.1 Confronting Corporate ODS Producers (1991)

- D.1.1 Germany: Greenpeace launches a billboard campaign featuring the photos of the CEO's of Hoechst and Kali Chemie with the words "Everybody is Discussing the Climate - We're Ruining It". Intention is to erect hundreds of giant billboards nation wide. Three billboards are put up initially in Hambourg and Hoechst threatens to sue Greenpeace for 500,000 deutchmarks. Hoechst's legal threat creates a media frenzy with pictures of the billboard featured in newspapers, magazines and shown on TV. The billboard campaign serves its purpose. A judicial process ensues and lasts for eight years with a final ruling stating that CEO's of corporations are public figures and can therefore be the target of public scrutiny.
- D.1.2 USA: March: Greenpeace protests ODS (carbon tetrachloride) production at Allied Signal plant in Baton Rouge (Louisiana) by fastening a metal box with activists in it on the railroad track leading into the facility.
- D.1.3 USA: Greenpeace contracts consultants to develop a corporate campaign strategy against Du Pont. Strategy identifies Seagram's as the most significant and publicly vulnerable shareholder with 24.5% of Du Pont Shares.

E. 1992

E.1 Public Outreach & Policy Advocacy (1992)

- E.1.1 Canada: Demanding urgent action on ozone protection, Greenpeace hangs banner at a Meeting of Canadian Ministers of the Environment in Vancouver while 50 drummers beat the sound of alarm. Protest leads to meeting between Ministers and Greenpeace.

- E.1.2 UK: GP activists, protesting the damage to the ozone layer, hang banner "Now Save the Ozone Layer" on House of Lords at Palace of Westminster.
- E.1.3 UK: Leading up to 4th Meeting of the Parties to the Montreal Protocol in Copenhagen, GP executes a campaign on the theme "Ten Days to Save the Ozone Layer". Campaign includes (a) advertisements depicting a young girl with the caption "Why do I have to wait until I am 40 for you to save the ozone layer"; (b) daily leafletting of main London train and subway stations; (c) publishing of information materials for Members of Parliament on funding issues, dangers of HCFCs, and impacts of ozone depletion.
- E.1.4 USA: Greenpeace sponsors "Ozone Action Tour" to campuses across the nation. Dozens of campuses are visited, and hundreds of students are mobilized. Student Environmental Action Coalition becomes engaged with ozone issues. Greenpeace door to door canvassers distribute ozone information around the country.
- E.1.5 USA: July 4, 1992: 50 activist march on beach with sign "Ozone Destruction by Du Pont: No Day At the Beach" while an airplane tows a banner reading "Ozone: We Lose It, We All Burn"
- E.1.5 Greenpeace exhibits the first ozone benign refrigerator, Greenfreeze, at the 4th Meeting of the Parties to the Montreal Protocol in Copenhagen. Greenfreeze receives lots of interest from delegates and Conference Chair, Dr. Mostafa Tolba refers to Greenfreeze at press conferences as a positive alternative. Greenfreeze vividly demonstrates to policy makers that contrary to the claims of the fluorocarbon industry, it is possible to provide cooling technologies without the use of HCFC and HFC replacements for CFCs.

E.2 Confronting Corporate ODS Producers (1992)

- E.2.1 Italy: Thirteen Greenpeace activists are arrested for blocking the road at Ausimont, the Italian producer of CFCs.
- E.2.2 Canada: Greenpeace organizes a vigorous protest by 200 people outside DuPont Canada's Annual General Meeting in Kingston, Ontario. Beating drums, protesters chant "Du Pont Earns while the Planet Burns" as they wade through police lines to enter the building hosting the meeting. Having purchased Du Pont shares so that it would be entitled to attend the Du Pont AGM, Greenpeace delivers thousands of protest signatures from the public to the Board of Directors and refuses to allow the meeting to proceed without a discussion on the company's role in causing ozone depletion. The confrontation leads to the suspension of the meeting.
- E.2.3 Canada: Greenpeace hangs banner "Seagram/DuPont = Profits from Ozone Destruction" at Seagram's annual meeting. Seagram's owns 24.5 of Du Pont shares. Protest leads to Greenpeace addressing shareholders at company's invitation.
- E.2.4 Sweden: GP activists chain themselves to entrance door of ICI headquarters and hoist a banner "ICI=World Class Ozone Destroyer", while protestors carry sandwich boards with similar message.
- E.2.5 UK: Greenpeace activists hang banner "ICI -World Class Ozone Destroyers" at ICI plant.
- E.2.6 UK: Borrowing a tactic from Greenpeace Germany (1990) Greenpeace UK mails thousands of letters to UK doctors explaining about the health impacts of ozone depletion, and asking doctors to avoid prescribing ICI pharmaceuticals because of ICI's continued CFC production. Physicians are also asked to write to ICI. Over 500 doctors agree, and hundreds of letters are sent by doctors to ICI Pharmaceuticals.
- E.2.7 UK: Greenpeace supporters stage over 200 protest meetings around the country against ICI, urging consumers not to buy ICI's popular Dulux brand paint. Over 40,000 leaflets are distributed, and thousands of signatures on petitions collected. Reportedly, protests cause consternation within ICI.
- E.2.8 UK: 80 GP activists wearing white suits, sunscreen and sunglasses with signs stating "ICI Still Destroying the Ozone Layer" sit in front of Royal Lancaster Hotel in

London, where ICI is holding its shareholders' AGM. Inside AGM Greenpeace representatives play tape pre-recorded messages in "talking briefcases" on ozone damage, health effects and ICI's ODS production. Extensive media coverage of Greenpeace protest.

- E.2.9 UK: Greenpeace launches complaint against ICI to Advertising Standards Authority (ASA) for misleading advertising on the global warming contribution of HFC-134a in "The House" Parliamentary magazine. In 1993 ASA upholds four of the five complaints made by GP. The Financial Times states "rulings are a significant embarrassment" for ICI.
- E.2.10 USA: Greenpeace activists protest in front of the NASA building in Washington DC: Dressed in white protective suits, with each activist holding one letter, they spell out "New Ozone Hole By Du Pont". Inside NASA officials are holding a press conference where they reveal that ozone depletion in the Earth's atmosphere is more severe than previously thought.
- E.2.11 USA: Du Pont AGM Protests (April): (a)Greenpeace billboards in Washington, DC, featuring a photo of DuPont's CEO with the caption: "Everyone's Talking About the Ozone Layer: I am Destroying It" receive national media attention: (b)Demanding an end to all ODS production, GP activists confront DuPont Directors by chaining themselves to the entrance door of art gallery where DuPont was hosting a dinner reception the night before annual share holders meeting. (b)Greenpeace organizes rally and march outside Du Pont Share Holders Meeting in Wylmington, Delaware, together with Jesse Jackson's Rainbow Coalition and other labour groups. (c)Greenpeace buys Du Pont shares to be able to attend shareholders' meeting. Students who were selected through a Greenpeace sponsored essay contest on ozone depletion are brought into shareholders' meeting to speak to the Directors. Greenpeace activist inside the meeting put on white radiation suits, and hand out letters to share holders asking them to move a motion to have Du Pont end the production of ODSs, or to divest from Du Pont. Wanted photos as environmental criminals for ozone destruction are circulated of the Board of Directors.

E.3 Market Intervention Solutions Campaigning(1992)

- E.3.1 Germany: Development of Greenfreeze
- E.3.1.a May 1992 GP initiates the commercial development of a hydrocarbon domestic refrigerator by bringing together Dortmund scientists with fridge manufacturer DKK Scharfenstein to produce a prototype of a fridge without fluorocarbons. Meanwhile, major German fridge manufacturers announce intent to switch to HCFCs and HFCs from CFCs.
- E.3.1.b August: Greenpeace tours Greenfreeze prototype across Germany and collects 70,000 advance orders at 500 DM each, from environmentally conscious German consumers. German Environment Minister Klaus Toepfer states that Greenfreeze has a "better total eco-balance than all the other fridges on the market. "
- E.3.1.c September: Major German fridge manufacturers denounce Greenfreeze as technically unfeasible.
- E.3.1.d November: GP exhibits Greenfreeze at 4th Meeting of the Parties to the Montreal Protocol in Copenhagen. Mostafa Tolba, Chair of the Montreal Protocol, pays tribute to Greenfreeze.
- E.3.1.e December: Greenfreeze technology receives the Gepruefte Sicherheit mark of safety by the TUV German Standards Inspection Organisation which then applies to all EC countries. German Government injects DM 5 million to bring fridges to market.

F. 1993

F.1 Public Outreach & Policy Advocacy (1993)

- F.1.1 Sweden: Greenpeace conducts national, city to city, ozone bus tour, taking an inventory of ODS emissions in each city, publicizing the major ozone destroying companies and public facilities in each region, circulating public petitions, and recruiting

volunteers. Greenpeace also sets up 1-800 telephone number to give daily updates on ozone levels, prior to such service being provided by the official Weather Service. Hundreds of phone calls are received daily. Extensive media coverage of both the tour and the telephone service.

- F.1.2 Italy: Greenpeace participates in numerous scientific and medical conferences on the impacts of ozone layer depletion and writes numerous articles on ozone depletion for mainstream press. Greenpeace organizes a rock concert with Italian rock star Gianna Nannini in support of ozone protection.
- F.1.3 Israel: First Greenpeace delegation goes to Israel to meet with industry, academia, government and media regarding methyl bromide production by the Dead Sea Bromide Company, the opposition of Israel to regulations being put in place on methyl bromide within the Montreal Protocol and to urge Israel to become a world leader in developing alternatives to methyl bromide.
- Austria: Greenpeace demands regular "UV updates" from government, conducts extensive media campaign to inform the public about the dangers of ozone depletion and successfully lobbies government to accelerate HCFC phase out dates. The organization mails ozone information to 120,000 supporters with information about the health impacts of UV radiation, the major corporate producers of ODSs and the availability of green alternatives to CFCs such as Greenfreeze. Greenpeace participates in a three-day fun fair in Vienna, where the Greenpeace booth features a giant ozone umbrella with a hole (earlier used in GP protest in Belgium).

F.2 Confronting Corporate ODS Producers (1993)

- F.2.1 USA: Greenpeace International and Greenpeace USA representatives meet with Seagram's Board of Directors in New York to express GP's opposition to Du Pont's ongoing ODS production. Greenpeace urges Seagram's to exercise its dominant 24.5% ownership of Du Pont to steer the company away from the production of ODSs. Greenpeace tells Seagram's that the organization considers Seagram's popular Tropicana fruit juice products as vulnerable to consumer awareness campaigning. (A few years later Seagram's divests from Du Pont.)
- F.2.2 Sweden: Greenpeace parks GP ozone tour bus in front of Dow Chemicals at Norrköping. Dow is using CFCs for the production of road building insulation even though alternatives are available. Company invites GP inside for discussions without media presence. GP insists on media being allowed to attend meeting. CEO wants to conduct meeting in English. Holds up CFC product and says "This is the problem, I mean the product". Clip makes it on TV. GP is invited to speak at Chamber of Commerce. Six months later company stops using CFCs.
- F.2.3 Greenpeace attends Du Pont AGM (April 28) in Wilmington, Del. and dispenses cool drinks from a Greenfreeze refrigerator from the back of a pick up truck parked outside meeting hall.

F.3 Market Intervention Solutions Campaigning (1993)

- F.3.1 Germany: February-March: Realizing the public demand for Greenfreeze, the four biggest producers Bosch, Siemens, Liebherr and Miele give up their resistance to hydrocarbon technology, and exhibit their own hydrocarbon models at the world's biggest household refrigeration fair in Domotechnica trade fare in Cologne, in March. Greenfreeze is awarded the much-coveted 'Blue Angel' eco label by German Environment Ministry.
- F.3.2 Japan: Greenpeace conducts media information campaign about Greenfreeze and organizes an exhibition of Greenfreeze refrigerators imported from Germany at the Ecology Centre in Tokyo. Over 600 representatives of Japanese and South Korean companies attend. Extensive media coverage in newspapers, magazines, trade magazines, radio and TV.
- F.3.3 China: First GP delegation goes to China (April) to attend the Household Electric

Appliance fair and meet with government and industry regarding Greenfreeze. German government offers DM4m to interested Chinese companies to make the switch to hydrocarbons. GP acts as a go-between facilitator in a deal between GTZ, Liebherr and Haier company for the production of Greenfreeze in China. Greenpeace expands its campaigning strategies as a catalyst for change in developing countries by accepting the role of being a networking facilitator between companies and governments of industrialized and developing countries.

- F.3.4 Denmark: Greenpeace conducts extensive media campaign promoting Greenfreeze, while urging the Danish government to push for stronger action in the European Community on ODS production and regulation.
- F.3.5 UK: Department of Environment buys 20 Greenfreeze fridges to encourage other organizations to support ODS-free technologies. Greenfreeze receives extensive coverage in mainstream and industry press and from the public.
- F.3.6 Austria: Greenpeace urges refrigerator retailers to sell Greenfreeze fridges in the Austrian market, and conducts media information campaign on Greenfreeze
- F.3.7 Australia: Greenpeace encourages Australian refrigerator manufacturers to switch to hydrocarbons; tries to engage tourist industry (hotels) regarding the scheduled phase-out of CFCs in 1996, and the need for them to look at clean alternatives; attends Eco-Design 2 Conference to present Greenfreeze information to designers, architects, engineers that are networking towards ecological sustainability; participates in Ozone protection Consultative Committee meeting of State and Federal governments and raises the link between HFCs and ozone and climate protection; enters Greenfreeze in the Australian Conservation Foundation's national Green Fridge Quest. Cooperative relationship between Email company and Greenpeace develops as Email decides to produce a hydrocarbon bar fridge.
- F.3.8 USA: Greenpeace unsuccessfully promotes Greenfreeze technology to US manufacturers, and conducts a consumer campaign against the double standards of Whirlpool refusing to make Greenfreeze available to the North American market while the company manufactures Greenfreeze refrigerators for the European market.
- F.3.9 Belgium: Greenpeace presents Greenfreeze to the Minister of the Environment under a giant umbrella with a hole symbolic of the ozone layer.
- F.3.10 Greenpeace USA and Greenpeace International organize the "Ozone Safe Cooling Conference" in Washington, D.C. (October 18-19) to investigate practical alternatives to fluorocarbons in cooling technologies. Dozens of papers by up to 40 speakers from Europe and North America are presented. Proceedings published in book format.

G. 1994

G.1 Public Outreach & Policy Advocacy (1994)

- G.1.1 Greenpeace International Ozone Campaign (September 28) launches web site to coincide with World Bank's 50th Anniversary. Hundreds of notices are emailed and faxed around the world to NGOs, governments, academics, media and industry. The ozone campaign becomes the first Greenpeace campaign to make use of the Internet and pioneers web activism. Site features information about ozone destruction and the GP ozone campaign, photos, and information about the World Bank. Supporters are urged to write to World Bank. Mainstream media, the Guardian in the UK and the Sydney Morning Herald in Australia note the entry of Greenpeace onto the world wide web.
- G.1.2 At the 6th Meeting of the Parties in Nairobi, Greenpeace successfully advocates for a decision from the Parties to request that the Technology Economic Assessment Panel (TEAP) investigate alternatives to HCFCs. Fearing obsolete technology dumping from industrialized countries, Greenpeace is approached by a number of developing countries for information on alternatives to CFCs/HCFCs.

G.2 Confronting Corporate ODS Producers (1994)

- G.2.1 Greece: Greenpeace occupies the CFC production unit of SICNG (Chemical Industries of Northern Greece) for 4 days. The occupation ends with an announcement by the Ministry of Environment that CFC production will be drastically reduced in Greece.
- G.2.2 France: Greenpeace activists confiscate canisters containing ozone destroying substances from the company Dehon, and load them into a truck with the intention of returning them to the producer Elf Atochem near Lyon. Purpose of action is to highlight the loopholes in the Montreal Protocol, and to focus on Atochem's continued production of ODSs and the World Bank's promotion of such substances.
- G.2.3 Argentina: Holding a banner "HCFCs are no Solution" 40 Greenpeace activists protest at Pan American Hotel where Elf Atochem is holding reception and seminar.
- G.2.4 Spain: GP activists hoist banner "World Bank: No \$ for Ozone Destruction" inside World Bank's 50th anniversary meeting (October 4-6) to protest the Bank's funding of ozone depleting substances. Action receives world wide media coverage.

G.3 Market Intervention Solutions Campaigning (1994)

- G.3.1 Denmark: Agreement is reached between Greenpeace and Bosch-Denmark to place a label on Bosch's hydrocarbon refrigerators stating "Greenfreeze technology as recommended by Greenpeace" and to include a message from Greenpeace in a special box on the front page of Bosch's refrigerator brochures. Greenpeace welcomes the plans of Danish fridge/freezer producer, Vestfrost launches on Greenfreeze model for the Danish market.
- G.3.2 Sweden: Greenpeace dumps up to 50 fridges in front of the gates of Electrolux to protest the company's plans to use HFC-134a. Company first refuses to meet with Greenpeace to discuss Greenfreeze but subsequently GP campaign compels Electrolux to convert to Greenfreeze.
- G.3.3 Latin America: Greenpeace holds technical seminars, private briefings and press conferences in Mexico, Argentina and Brasil on hydrocarbon refrigeration. Brazilian compressor manufacturer Embraco acknowledges that the company is testing hydrocarbon compressors.
- G.3.4 India: In co-operation the Centre for Science and Environment in Delhi, Greenpeace International conducts a lobbying and press tour of India (September 5-9) to promote Greenfreeze and to warn decision makers against the World Bank's promotion of HCFCs and HFCs at a time when European manufacturers were embracing hydrocarbons. GP highlights the role of World Bank's seven-person advisory panel (which is dominated by western industrial interests including two members from ICI) in blocking Greenfreeze and promoting fluorocarbons. GP supports the establishment of coalition of NGO's to oppose the transfer of HCFC and HFC technology into India.
- G.3.5 Spain: Greenpeace exposes Electrolux's double standards because of the company's production 40,000 Greenfreeze units in Spain for export to Germany, and its refusal to sell Greenfreeze in Spain.
- G.3.6 UK: Greenpeace co-operates with Britain's largest LPG producer Calor Gas around the company's launch of a new class of hydrocarbon-blend CARE refrigerants. CARE products are introduced as replacements for CFCs, and alternatives to HCFCs/HFCs in commercial units. Calor enters hydrocarbon refrigerant market after learning about Greenfreeze.
- G.3.7 Australia: Greenpeace registers "Greenfreeze" and "Greenfreeze technology" brands in Australia and finalizes plans with Email company for GP endorsement of Email Greenfreeze product with sticker "Greenfreeze technology approved by Greenpeace".

H. 1995

H.1 Public Outreach & Policy Advocacy (1995)

- H.1.1 Greenpeace erects a banner with the words "Stop Ozone Killers" and displaying the names of major countries and companies that cause ozone depletion, at entrance to the 7th Meeting of the Parties to the Montreal Protocol meeting in Vienna. Delegates to the meeting need to walk through an "ozone hole" in the banner as they enter the convention center. Greenpeace calls on nations and companies that have profited from sales of CFCs to pay for phasing-out all ODSs and HFCs through an eco-tax on these substances. Greenpeace backs up its policy recommendations with three major reports: (a) "Full of Holes: The Montreal Protocol and the Continuing Destruction of the Ozone Layer": critique of the failure of the MP to act more effectively to ban ODSs; (b) "The Ozone Layer Destroyers: Whose Chlorine & Bromine Is It?": inventory of ODS production from 1986-1995: assigning their proportional share of global ozone depletion by companies and countries; and (c) "Our Radiant Planet: The Dangers of UV-B Radiation for Human health and the Global Biosphere"

H.2 Confronting Corporate ODS Producers (1995)

- H.2.1 Argentina: Holding a banner "HCFCs are no Solution" 40 GP activists protest at Pan American Hotel where Elf Atochem is holding reception and seminar. The organization engages in an information war with chemical corporations and confronts World Bank representatives over the use of HFCs as refrigerants. Two Argentinean companies write to Greenpeace to complain about the World Bank's exclusive support for fluorocarbon alternatives to CFCs.

H.3 Market Intervention Solutions Campaigning (1995)

- H.3.1 Greenpeace publishes "Back to the Future: A Technical Survey of Information Regarding Fluorocarbons Vs. Hydrocarbons in Domestic Refrigerators" which is reprinted in the German Government's GTZ 1995 Hydrocarbon Year Book. (January, 1995).

I. 1996

I.1 Public Outreach & Policy Advocacy (1996)

- I.1.1 Denmark: Greenpeace advocates for the elimination of fluorocarbons and publicly applauds the internationally ground breaking announcement by the Danish Minister of Environment and Energy of the beginning of a ten year HFC phase-out strategy.
- I.1.2 At the 8th Meeting of the Parties to the Montreal Protocol in Costa Rica, Greenpeace criticizes the Parties for insufficiently funding the Multilateral Fund and calls on them to stop funding HCFC/HFC projects, to accelerate the phase-out of methyl bromide, and to end the exemption for CFCs in metered dose inhalers.
- I.1.3 Belgium: Chaining themselves to storage tanks, GP activists protest against a shipment of the ozone depleting substance methyl bromide from Israel by occupying the storage tanks of Hessian Co. and preventing the company from receiving the necessary permit to receive the shipment. One key to the locks is offered to each of the three levels of government on the condition that governments take action to restrict the use of methyl bromide. In the midst of media attention the Federal Minister of the Environment accepts the key and makes commitments for an earlier national phasing out of methyl bromide. This creates a domino effect that influences the rest of the European Union to accelerate phase-out schedules for methyl bromide.

I.2 Market Intervention Solutions Campaigning (1996)

- I.2.1 EU 'Eco-Label' awarded to Greenfreeze but not to any refrigerators containing fluorocarbons.
- I.2.2 Argentina: GP launches corporate/consumer campaign against the double standards of Whirlpool for refusing to make Greenfreeze products available to the Argentinean consumers while the company manufactures Greenfreeze refrigerators for

the European market. GP distributes leaflets at retail outlets urging consumers to send letters to Whirlpool. More than 5,000 letters are generated from the public. In October Greenpeace activists scale giant Whirlpool billboard in center of Buenos Aires and changes the messages from "Whirlpool Brings Quality to Your Life" to "Whirlpool Destroys the Ozone Layer". Other activists hand out Greenfreeze cooled drinks to the public and the media. Much media coverage although newspapers, weary of losing revenue from Whirlpool's advertising, are reluctant to mention the company by name. Following action Whirlpool requests a meeting with GP, and the company sends a technical mission to Italy and the UK to investigate Greenfreeze. Subsequently Whirlpool Argentina makes commitment to introduce Greenfreeze into the Argentinean market by 2000.

J. 1997

J.1 Public Outreach & Policy Advocacy (1997)

- J.1.1 Greenpeace intervenes at the 23rd Meeting of Executive Committee of the Multilateral Fund to critique the Fund's extensive funding of HCFC projects despite past resolutions of opposite intent by the Parties and by the Executive Committee.
- J.1.2 At the 9th Meeting of the Parties in Montreal, Greenpeace accepts the UNEP Ozone Protection Award for promoting ozone and climate friendly refrigeration and for having made Greenfreeze technology freely available to the world. At the same time Greenpeace criticizes UNEP for the hypocrisy of giving the UNEP Ozone Protection Award to the chemical industry lobby group the Alliance for Responsible Atmospheric Policies. GP calls for reparation payments to be made by the chemical industry for the damage that its ODS products have caused to human health and the environment.
- J.1.3 At the 3rd Meeting of the Parties to the Climate Convention (December, 1997 Kyoto, Japan) Greenpeace successfully advocates for the inclusion of HFCs in the Kyoto basket of greenhouse gases whose aggregate emissions, according to the terms of the Kyoto Protocol agreement, must be reduced to protect the climate. The inclusion of HFCs in the Kyoto basket verifies Greenpeace's warnings over the previous decade regarding the unsuitability of HFCs as long-term replacements for CFCs, and sends shock waves through the global refrigeration and cooling industry.
- J.1.4 Denmark: Greenpeace participates, at the invitation of the Danish EPA, in the steering group of a Danish Technical Institute project to write a report on "Substitution for strong greenhouse gases: HFCs, PFCs and SF6. Report becomes the basis of government policy and eventually leads to a 2006 phase-out schedule for these gases.
- J.1.5 Denmark: Greenpeace highlights the dangers of frivolous use of HFCs by publicizing that one horn with HFC-134a - used in football games - releases 340 gramme HFC-134a, which is the CO₂-equivalent of driving 1300 km with a normal car. Danish government promises to ban such use of HFCs in the near future.
- J.1.6 Denmark: Greenpeace urges the government to institute an eco-tax on potent industrial greenhouse gases (HFCs, PFCs and SF6). On March 1, 2001 eco-tax on these substances comes into force in Denmark.

J.2 Market Intervention Solutions Campaigning (1997)

- J.2.1 Greenpeace initiates three-way collaboration between Cuba, Germany and GPI to convert Cuba's refrigerator factory (INPUD) from CFCs to hydrocarbons. Project completed with Global Environmental Fund support in 1999. To further assist Cuba's capacity to produce its own hydrocarbon refrigerants, Greenpeace facilitates the visit of Cuban scientists to Canada in 1999, leading to the procurement of Canadian gas purification technology for Cuba. Project is supported by the governments of Canada and Germany.
- J.2.2 Argentina: Since the end of the Greenpeace ozone/Greenfreeze campaign in Argentina little progress has been made in the domestic production of Greenfreeze, providing a vivid example of the role that Greenpeace campaigning can play in motivating industry and government.

K. 1998

K.1 Public Outreach & Policy Advocacy (1998)

- K.1.1 At the 10th Meeting of the Parties to the Montreal Protocol in Cairo, Greenpeace calls on the Parties (a) to amend the Protocol so as to enable the Parties to place new ozone depleting substances on a fast track phase-out regime; (b) to accelerate the phase-out regime for all ODSs; and (c) encourage developing countries to leap-frog the use of HCFCs and HFCs.
- K.1.2 UK: Greenpeace campaigns against the proposed use of HFCs in the air-conditioning system of the Millennium Dome in London. While the campaign does not lead to a reversal of the pro-HFC decision, it does cause a parliamentary debate, and focuses attention on the need to phase-out HFCs. The campaign also prompts McDonald's to use only HFC-free equipment in its Millennium Dome restaurants.

K.2 Market Intervention Solutions Campaigning (1998)

- K.2.1 Greenpeace drafts proposal for video and training booklet "Back To The Future: Working Safely with Hydrocarbons". Proposal was jointly conceived with UNEP, and becomes a three-way collaboration between UNEP, GTZ, and GPI. Video and booklet completed in 1998, and set for distribution in all UNEP languages in 2001.
- K.2.2 Japan: Greenpeace Japan holds business seminar entitled "HFC FREE TREND, THE CHOICE OF GERMAN INDUSTRY": 60 companies representing all major refrigerator manufacturers, top convenience and food chain stores attend. Greenpeace conducts "I chose Greenfreeze" campaign and over 5081 consumers sign up.
- K.2.3 UK: Greenpeace welcomes the launch of the new KYOTO brand Greenfreeze range of domestic refrigerators and freezers by the large food retailer Iceland Foods. Iceland announces that it will only sell hydrocarbon refrigerators and that it will convert the cooling system in all its stores to non-fluorocarbon technologies.

L. 1999

L.1 Public Outreach & Policy Advocacy (1999)

- L.1.1 At the 11th Meeting of the Parties to the Montreal Protocol in Beijing, Greenpeace critiques the Parties for failure to accelerate HCFC phase-out, and for not moving to effectively curb the proliferation of new ODSs. Greenpeace repeats its call for a global cap on HFC production and consumption and for a legally binding agreement between governments and the chemical industry to assure that industry will assume full responsibility for damages accruing from extensive use of HFCs. Greenpeace urges the Parties to increase funding for the Multilateral Fund to enable developing countries to accelerate the phase-out of all ODSs.

L.2 Market Intervention Solutions Campaigning (1999)

- L.2.1 Japan: Greenpeace Japan submits more than 10,000 signatures of consumers to the president of Matsushita refrigeration company, demanding an early launch of Matsushita's Greenfreeze models in Japan. Director of Greenpeace International meets the President of Matsushita Refrigeration Company to demand early launch of Matsushita's Greenfreeze model in the Japanese market. Greenpeace holds meetings with Matsushita representatives in several European countries to reiterate Greenpeace's expectations from the company. On December 28, Matsushita announces plans to launch Greenfreeze in Japan by the end of 2002.

M. 2000

M.1 Public Outreach & Policy Advocacy (2000)

- M.1 UK: Greenpeace meets with the Minister of the Environment critiquing the report of government consultants which erroneously underestimate the amount of future HFC emissions from the UK and Europe. Subsequent to the meeting, UK Government Policy on Climate Change states: "There is a clear signal to industry that hydrofluorocarbons

(HFCs) are not a sustainable technology in the longer term, and that they should only be used where there are no safe, cost-effective, practical and environmentally acceptable alternatives....."

- M.1.2 Greenpeace participates in European conference on "Joining Efforts to Limit Emissions of HFCs" in Luxembourg, critiquing the pro-HFC bias of TEAP's experts, and providing inventory of HFC free technologies around the world. (February, 2000). Greenpeace shows "Cool Technologies: Working Without HFCs" video and distributes report "How to Limit HFC/PFC/SF6 Emissions? Eliminate Them"
- M.1.3 GPI attends 12th Meeting of the Parties to the Montreal Protocol in Ouagadougou, calling on the Parties: (a) to stop funding HCFC projects; (b) to amend the Protocol so as to enable the Parties to place new ozone depleting substances on a fast track phase-out regime; (c) to restrict the use of HFCs to application where there are no safer alternatives available. GP interventions welcome the commitments of Coca Cola, McDonald's and Unilever to stop using HFCs; commend governments of Denmark, Ireland and UK for discouraging the use of HFCs; critique the import of new CFC refrigerators from China into the United States, and the export of used CFC refrigerators from industrialized countries to developing countries; and call upon fluorochemical industry to make reparation payments for the damage their products have caused to the ozone layer and the climate.

N. 2001

N.1 Confronting Corporate ODS Producers (2001)

- April: Greenpeace Greece, with the support of activists from Greece, Germany and Slovakia, occupies for four days the production facility of Phosphoric Fertilizers Industry S.A (PFI,) in Thessaloniki, northern Greece, demanding an end to the emissions of HFC-23 (GWP 11,700) by-products from the production of HCFC-11, as well as the phasing-out HCFC and CFC production. The occupation results in the Greek government agreeing to legislate further controls on the emissions of HFCs and the production of HCFCs and CFCs.

APPENDIX B

Market Intervention Solutions Campaigning

Representative sampling of the Greenpeace Market Intervention Solutions Campaigning in the Commercial Refrigeration Sector

A. 1992

- A.1 UK: GP criticizes Sainsbury's supermarket chain for its use of HCFCs instead of alternatives such as hydrocarbons and ammonia. GP collects 80,000 signatures from Sainsbury customers asking the company stop using HCFCs.

B. 1994

- B.1 UK: Greenpeace UK co-operates with Britain's largest LPG producer Calor Gas around the company's launch of a new class of hydrocarbon-blend refrigerants- CARE-30. CARE products are introduced as replacements for CFCs, and alternatives to HCFCs/HFCs in commercial units. Calor enters hydrocarbon refrigerant market after learning about Greenfreeze.
- B.2 UK: Greenpeace publishes two reports on supermarket refrigeration: "Shopping the Planet": expose of supermarkets use of HCFCs & HFCs (September, 1994); "Supermarket Greenfreeze — supermarket refrigeration & the environment": calling on UK supermarkets to switch to non-fluorocarbon refrigeration. (October, 1994)
- B.3 UK: Greenfreeze targets Tesco, second largest British supermarket, to compel the company to fulfil previous commitments to using non-fluorocarbon refrigeration. GP tours around the country a mobile mini-supermarket truck fitted with refrigeration technology, with a big logo on the side of the truck: "Fiasco: Tesco's Freezers Wreck the Planet". Tour evokes response from other retailers expressing concern about the use of HFCs. October 8th. GP local groups nation-wide hold protests outside Tesco stores, collecting thousands of signatures.
- B.4 UK: Retail chain Iceland announces trial for using hydrocarbons in its retail, domestic and transport operations.

C. 1995

- C.1 Greenpeace International organizes European Supermarket Greenfreeze tour. Belgium, Denmark, Czech R., Austria, Italy, Spain, France and Switzerland participate. A 16-metre trailer exhibiting Supermarket Greenfreeze, secondary cooling system, is toured throughout Europe. Names of companies providing non-fluorocarbon equipment disseminated.
- C.2 UK: Sainsbury's release test data showing Greenfreeze technology was the most efficient in a comparison of four systems (HCFC-22, HFC-134a, HFC blend R404a and hydrocarbons). The company opens first UK supermarket to use Greenfreeze technology in Horsham, Sussex. Safeway's tests show similar results. Marks and Spencer plans to open a store using Greenfreeze cooling technology.

D. 1996

- D.1 Germany: GP conducts supermarket Greenfreeze campaign in 50 designated cities across Germany. Advertisements are placed in supermarket windows, featuring 'ozone holes, UV, skin cancer and climate change', publicizing that an estimated 3,500 tonnes of CFCs and HCFCs, with a leakage rate of 20-30% or 700 tonnes a year, is used in German supermarkets.

E. 1998

- E.1 UK: GP welcomes the launch of the KYOTO Greenfreeze range of domestic refrigerators and freezers by Iceland Foods. Iceland announces that it will only sell hydrocarbon refrigerators and that it will convert the cooling system in all its stores to non-fluorocarbon technologies. In 1999 Greenpeace agrees Iceland Frozen Foods, using Greenpeace's logo on advertising material for Greenfreeze refrigerators with a notation: "Greenpeace endorsed technology at high street prices."

1999

- E.2 UK: Tesco's opens new Greenfreeze supermarket store in Enfield, Sainsbury's opens a Greenfreeze supermarket in 'millennium store', at Greenwich, London, and McDonald's opens Greenfreeze restaurant in the Millenium Dome.

APPENDIX C

Sydney Olympic Greenfreeze Campaign

Summary highlights of the Greenpeace campaign against the use of fluorocarbons at the Sydney 2000 Olympic Games by the Olympic Coordinating Authority and the major Olympic Sponsors.

A. 1994

- A.1 Australia: Greenpeace plays a leading role in the drafting of the Environmental Guidelines for the Sydney 2000 "Green Games" Olympics, which specifically calls for no CFCs/HCFCs or HFCs to be used at the Olympic site. Inclusion of Environmental Guidelines in Sydney's Olympic bid to the International Olympic Committee is credit with helping Sydney win the competition to host the games.

B. 1997

- B.1 Australia: Greenpeace is instrumental in having HFCs included in the basket of greenhouse gases whose total emissions are to be reduced under the terms of the 1997 Kyoto Protocol. The inclusion of HFCs in the Kyoto Protocol strengthens Greenpeace's case against their use at the Sydney 2000 Olympics.

C. 1998

- C.1 Australia and GPI: Greenpeace meets with the Olympic Coordinating Authority and all the major corporate sponsors to reiterate the organization's commitment to ensure that the Olympic Environmental Guidelines, including its provisions for the use of ozone and climate friendly refrigeration and air-conditioning technologies, will be fully adhered to.

D. 1999

- D.1 Australia & GPI: Greenpeace maintains the pressure against the use of HCFCs and HFCs at the Olympic site with the publication of a report "Olympics is Building A Bigger Ozone Hole". The report critiques the use of HCFCs in the Olympic SuperDome. Greenpeace launches a legal challenge in Federal Court against the Olympic Coordinating Authority.

E. 2000

- E.1 Australia: As the opening date of the Sydney Olympics rapidly approaches Greenpeace escalates the campaign against the use of HFCs in cooling equipment by the major Olympic sponsors: Macdonald's and Coca Cola.
- E.1.1 April: Greenpeace launches a campaign against major Olympic sponsors Coca-Cola & McDonald's with the publication of a stinging report: "Green Olympics, Dirty Sponsors"
- E.1.2 June 1: Greenpeace unveils a global internet campaign targeting Coca Cola for undermining the Environmental Guidelines of the Sydney 2000 Games by its worldwide use of global warming HFC gases. The campaign features polar bears, the icon Coca Cola uses to sell billions of drinks. Scientific studies show Arctic polar bears are under threat of starvation due to climate change. A website www.cokespotlight.org (created by Adbusters, Vancouver, Canada) generates extensive public interest and thousands of emails to Coca Cola.
- E.1.3 June 14: Greenpeace protests outside headquarters of Coca-Cola displaying a monster 5-metre high vending machine that dispensed six activists dressed as oversized Coke cans. The cans display the message "Enjoy Climate Change". Six other activists dressed as polar bears and hold placards with the message "Save me now! Coca Cola stop using HFCs".

- E.1.4 June 16: Greenpeace launches national protest campaign over Coca-Cola's use of HFC in Australian cities. GP activist place "Enjoy Climate Change" (in Coke fonts) stickers on Coke vending machines in different cities.
- E.1.5 June 25: Greenpeace lobbies senior Coca Cola executives gathered in a European meeting against the use of HFCs.
- E.1.6 June 28: Coca-Cola announces plans to globally phase-out the use of hydrofluorocarbons (HFCs) in refrigeration by the Athens Olympic Games in 2004. Company makes plans to expand its research into refrigeration alternatives and insist that suppliers announce specific time schedules to use only HFC-free refrigeration in all new cold drink equipment by 2004. Greenpeace congratulates Coca Cola.
- E.1.7 August 9: Greenpeace welcomes announcement by Foster's Brewing Group, an Olympic supporter, plans to phase out the use HFCs.
- .1.8 August 15: GP issues third and final Environmental Report Card of the Green Olympics, highlighting Coca Cola's commitment as the major success of the Games.
- E.1.9 September 1: On arrival to Sydney, the Rainbow Warrior hoists a 17 x 3 metre banner reading "Give the Planet a Sporting Chance". Greenpeace calls on governments, industry, Olympic organisers and individuals to implement the environmental solutions showcased at Sydney's 2000 GreenGames.
- E.1.10 September 5: Olympic sponsor, Unilever Foods, world's largest ice cream producer, including Streets Ice Cream, announces that by 2005 it will globally phase out the purchase of ice cream freezers which use HFCs.
- E.1.11 September 11 Mcdonalds sends letter to Greenpeace International stating that "by copy of this letter we reaffirm our commitment to find safe and viable HFC-free alternatives by 2004".
- E.1.12 September 20: Greenpeace presents the International Olympic Committee (IOC) with a new set of environmental guidelines - an updated and tougher version of those developed in 1993 for Sydney's Olympics. GP calls on the IOC to formalise these guidelines as a set of rules by enshrining them in the Olympic Charter and within future cities' bid criteria. The guidelines should be non-negotiable and backed up by national law in host countries. The Guidelines calls for a ban on the use of any HCFC, HFCs, PFCs for any building processes, products and servicing systems, and all RAC uses.

APPENDIX D

Greenpeace Ozone Campaign Publications

A partial list of reports, brochures and leaflets published mostly in English by the Greenpeace Ozone Campaign.

A. 1990

- A.1 GPI: "The Failure of the Montreal Protocol: 50% More Production": A concise critique of the MP phase-out regime, the failure of the MP halt the growth in ODS production, and a warning against the use of potent greenhouse gas substitutes for ODSs.: prepared for the 2nd Meeting of the Parties in London (June, 1990)
- A.2 Canada: "Stop It Now! A Greenpeace Response to Canadian Government CFC Control program"
- A.3 UK: "CFC Profit: Ozone Loss- who really threatens the ozone layer?": identifying the major ozone depleting countries (1990)

B. 1991

- B.1 Japan: "CFC Report: The state of the production and consumption of major ODSs in Japan": May 1991 (Japanese and English)

C. 1992

- C.1 GPI: "Climbing Out of the Ozone Hole: A Preliminary Survey of Alternatives to Ozone Depleting Chemicals": A sectoral survey of alternative technologies: (October, 1992)
- C.2 Canada: "Profit\$ Out of Thin Air: DuPont and Ozone Destruction": chronological assessment of Du Pont's role in Ozone Destruction
- C.3 Canada: "Ozone Report: Greenpeace Presentation to the Environmental Protection Committee of the Canadian Council of Ministers of the Environment" (04 29)
- C.4 Canada: "Seagram Profits from Ozone Destruction": Leaflet featuring the photos of the Seagram's Board of Directors
- C.5 Canada: Consumer leaflet against Seagram's product Tropicana; Braille post card to Seagrams.
- C.6 USA Ozone Campaign Materials and Paraphernalia: (a) Ozone (cut out hole) Postcard and buttons; (b) "We Make Ozone Holes Easier"- Whirlpool post card; (c) Ozone Action Alert: Cartoon brochure; (d) "The Effects of Ozone Destruction"- leaflet; (e) "Ozone Hole by Du Pont" sun glasses
- C.7 Japan: "FC Report II: The state of the usage of HCFCs and HFCsin Japan" (Japanese)
- C.8 UK: "Danger Overhead: Britain's Vanishing Ozone Layer": potential dangers of a growing ozone hole (January, 92)
- C.9 UK: Greenpeace Briefing: "Ozone Layer": critique of UK government's failure for not speeding up phase-out of CFCs like some other European countries
- C.10 UK : "Making the Right Choices: Alternatives to CFCs and other ozone depleting chemicals": inventory of CFC/HCFC/HFC-free alternatives
- C.11 UK: "Alternative Technologies in Refrigeration and Air Conditioning": 14 page briefing.
- C.12 UK: "Neglecting Alternatives: how Government inaction is destroying the ozone layer": critique of UK government's continued support of production and use of CFCs, halons and HCFCs at the expense of safer alternatives.

D. 1993

- D.1 GPI: "Europe's Ozone Failure: Critique of a Draft proposal for a Council regulation (EEC) on Substances that Deplete the Ozone Layer": analysis of proposed European HCFC and methyl bromide regulations: (April, 1993)
- D.2 GPI: "Ozone-Safe Cooling: proceedings of Ozone Safe Cooling Conference": Washington, D.C. (October, 1993)
- D.3 GPI: "HCFC's & HFCs: The Bad Gamble: Overview of Science and Policy Choices"
- D.4 GPI: Greenfreeze: The World's first CFC and HFC free Household Refrigerators"
- D.5 GPI: "In And Out of the Ozone Hole": survey of technological alternatives to CFCs/HCFCs/HFCs
- D.6 Austria: "Position Paper of Austrian Scientists and Environmentalist Groups on Problems Posed by Alternatives to ODSs": March, 1993.
- D.7 Japan: "CFC Substitutes Will Not Save the Earth: The Environmental Impacts of Refrigerants and Insulation Foaming Agents for Household Refrigerators in the Developing Countries": submitted to TEAP of UNEP to show the size of the impacts of HCFCs and HFCs.
- D.8 UK: Saving the Ozone Layer With Greenfreeze": The Greenpeace Guide to Fridges
- D.9 USA: "Climbing Out of the Ozone Hole: Supplement with Addendum": Extensive inventory of ODS Alternative Technologies and Suppliers in the United States: (February, 1993)

E. 1994

- E.1 GPI: "HCFCs: Technology Update: prepared for 10th OEWG, Nairobi. Critiques TEAP's exclusion of non-fluorocarbon alternatives.
- E.2 GPI: "Money To Burn: The World Bank, Chemical Companies and Ozone Depletion" : analysis of the role of the World Bank in promoting HCFC/HFC technologies with MF funds and the pro-chemical industry affiliation and bias of WB expert consultants (September, 1994)
- E.3 Germany: "Hydrocarbons- High Tech in Refrigeration: A technology Conquers the World": history of Greenfreeze and survey of Greenfreeze models on European market in 1994 (May, 1994)
- E.4 Japan: "The Ozone Layer Being Destroyed": in Japanese for public awareness campaigning.
- Research paper submitted to TEAP documenting that the essential use classification for CFCs in commercial refrigeration, for which the Japanese government applied to the MOP, was not necessary.
- E.5 Japan: "Are CFCs/HCFCs/HFCs Really Indispensable for Frozen Food" (September, 1994)
- E.6 Japan: "Problems with the TEWI Argument" (October 1994): submitted to UNEP
- E.7 UK: "The Greenfreeze Story: A story of a solution which governments ignored and industry tried to stop": story of Greenfreeze from 1990 to 1994
- E.8 UK: "Shopping the Planet": exposé of supermarkets use of HCFCs & HFCs (September, 1994)
- E.9 UK: "Supermarket Greenfreeze- supermarket refrigeration & the environment": calling on UK supermarkets to switch to non-fluorocarbon refrigeration. (October, 1994)
- E.10 UK: "A Chemical Disaster: Why HFCs have no future": outlines of the global environmental hazards of HFCs.

F. 1995

- F.1 GPI: "Back to the Future: A Technical Survey of Information Regarding Fluorocarbons Vs. Hydrocarbons in Domestic Refrigerators": reprinted in the GTZ 1995 Hydrocarbon Year Book. (January, 1995)
- F.2 GPI: "Headed For Catastrophes: HFCs" arguments against HFCs: prepared for Berlin Climate Summit (February, 1995)
- F.3 GPI: "Current State of the Ozone Layer" : update of the ozone crisis (March 1995)
- F.4 GPI: "Obsolescence in the Making: Prolonging the Magnitude and Duration of the Ozone Crisis for Profit" an HCFC Fact Sheet (1995)
- F.5 GPI: "No Time for Complacency: Next Steps to Save the Ozone Layer": Prepared for 12th OEWG (Sept 1): calling for early phase-out of methyl bromide, accelerated controls on HCFCs and CFCs, and avoiding loopholes and exemptions: (September, 1995)
- F.6 GPI: "No Excuses: A report on ozone and climate friendly technologies that documents why CFCs/HCFCs/HFCs are obsolete": prepared for the 7th MOP (October, 1995)
- F.7 GPI: "Full of Holes: The Montreal Protocol and the Continuing Destruction of the Ozone Layer": critique of the failure of the MP to act more effectively to ban ODSs: prepared for the 7th MOP (September: 1995)
- F.8 GPI: "The Ozone Layer Destroyers: Whose Chlorine & Bromine Is It?": Inventory of ODS production from 1986-1995: assigning their proportional share of global ozone depletion by companies and countries: prepared for the 7 MOP (November, 1995)
- F.9 GPI: "The Montreal Protocol: Ten years of profit and complacency": GP pamphlet highlighting data from "Whose Chlorine & Bromine Is It" report: (November, 1995)
- F.10 GPI: "Hydrocarbons and Other Progressive Answers to Refrigeration: Proceedings of the Hydrocarbon Workshop at the 1995 International CFC & Halon Alternatives Conference & Exhibition in Washington, DC. (October, 1995)
- F.11 GPI: "Our Radiant Planet: The Dangers of UV-B Radiation for Human health and the Global Biosphere": extensive study accompanied with a summary report: prepared for the 7th MOP (November, 1995)
- F.12 Japan: "Methyl Bromide in Japan: research paper on the production and use of MBr in Japan": submitted to the Japanese Government in preparation for the 7th MOP in Vienna.

G. 1996

- G.1 GPI: "Early Phase-Out of Methyl Bromide and HCFCs: An Environmental Imperative: Prepared for 13th OEWG: Geneva: (August, 1996)
- G.2 GPI: "Greenfreeze: A Revolution in Domestic Refrigeration: A Greenpeace Solution Based Campaign": prepared for UNEP ODS Officers Network Workshop (November, 1996)
- G.3 GPI: "Radically Accelerated Phase Out of Methyl Bromide and HCFCs with Controls on HFCs: AN ENVIRONMENTAL IMPERATIVE": prepared for 8th MOP in Costa Rica: (November, 1996)
- G.4 Denmark: Greenpeace Consumer Guide to 106 Greenfreeze Refrigerators on the Danish Market.

H. 1997

- H.1 GPI: "Acting as If the Future Matters": prepared for "From Carbon Cycle to Bicycle" Conference in Victoria, B.C.: focus on globalization, climate change and role of corporation in international protocols: (April, 1997)
- H.2 GPI: "Greenfreeze: A Global revolution in Domestic Refrigeration: A

- Greenpeace Solution”- prepared for 9th MOP in Montreal (September, 1997)
- H.3 GPI: “Saving the Ozone Layer- The Montreal Protocol and Moral Priorities”: prepared for 9th MOP in Montreal: critiques the role of global chemical cartel in hijacking the MP and calls for the elimination of HFCs: (September, 1997)
- H.4 GPI: “Depleting the Intent of the Parties to the Montreal Protocol”: GP intervention at 23rd ExComm: (November, 1997)
- H.5 GPI: “Headed For Catastrophes: HFCs”: prepared for the 3rd MOP of the Climate Convention: Kyoto: argument against HFCs (December, 1997)

I. 1998

- I.1 GPI: “GREENFREEZE: A Global Revolution In Refrigeration”: update prepared for the 3rd Natural Working Fluids Conference: Oslo (June, 1998)
- I.2 GPI: “Playing with an Angry Beast”: calling for an early phase-out of HFCs, HCFCs & Methyl Bromide: prepared for 17th OEWG: Geneva (July, 1998)
- I.3 GPI: “What’s Next”: GP presentation at the 1st GEF Assembly in New Dehli: overview of globalization & the need for sustainable technologies: (April, 1998)
- I.4 GPI : “Greenfreeze: A Greenpeace Solution: An Example of How We Can Meet Human Needs with Sustainable Technologies”: submitted to the “Ecofrig-The Indian Dimension” Conference: New Delhi (September, 1998)
- I.5 GPI: Keeping Cool With Sustainable Refrigeration Technologies”: prepared for Greenpeace Japan Business Workshop: focus on global warming and ozone depletion, dangers of HFCs and need for sustainable technologies like Greenfreeze. (October, 1998)
- I.6 GPI: “The Best Last Chance Opportunity to Protect the Fragile Ozone Layer”: prepared for the 18th OEWG and 10th MOP in Cairo: calling for early phase out of HCFCs and methyl bromide (November, 1998)
- I.7 GPI: “From Montreal to Kyoto and Back- Aboard the HFC Express”: prepared for the 18th OEG and 10th MOP in Cairo: calling for the elimination of HFCs (November, 1998)
- I.8 GPI “Finding Environmentally Safer Technologies”: Greenpeace paper, focusing on Greenfreeze in GEF Book “Valuing the Global Environment: Actions and Investments for a 21st Century”: (April, 1998)
- I.9 UK: “The Fridge that came in from the cold”: Greenfreeze promotional booklet (1998)
- I.10 GPI: “Zero Tolerance for New ODSs Required: Umbrella Clause Amendment Proposal”: Greenpeace position paper prepared for the 18th Meeting of the Open Ended Working Group and the 10th Meeting of the Parties to the Montreal Protocol in Cairo, (November, 1998)

J. 1999

- J.1 GPI: “How to Limit HFC/PFC/SF6 Emissions? Eliminate Them:” GP submission for the Joint IPCC/TEAP Expert Meeting Petten, The Netherlands critiques the pro-HFC bias of TEAP’s experts (June 26-28, 1999):
- J.2 GPI: “The ODS Merry-Go-Round”: prepared for 27th ExComm (March 1999, and updated 19th OEWG (June 1999) and 11th MOP (Beijing, November, 1999): urges acceleration on HCFC phase-out dates and critiques MLF funding for HCFC projects.
- J.3 Australia: “Olympics is Building A Bigger Ozone Hole”: critique of the use of HCFCs in the Olympic SuperDome

K. 2000

- K.1 GPI: “How to Limit HFC/PFC/SF6 Emissions? Eliminate Them:” GP submission to the “Joining Efforts to Limit Emissions of HFCs: Luxembourg: critiques the pro-HFC bias of TEAP’s experts, and provides inventory of HFC free technologies

- around the world. (February, 2000)
- K.2 GPI: "Olympic Strides Needed for Ozone Layer & Global Climate Protection": prepared for the 20th OEWG: focus on corporations and governments phasing-out HFCs: (July, 2000)
 - K.3 GPI: "Things Go Better with Environmentally Responsible Corporations": prepared for 12th MOP in Ouagadougou: heralding Coke, McDonald's and Unilever's new HFC policy & critique of continued funding of HCFC projects by MF: (December, 2000)
 - K.4 Australia: "The environmental Record of the OCA": a list of eight environmental concerns related to the Olympic Coordination Authority's (OCA) performance, including the failure of OCA and the major Olympic sponsors to adopt CFC, HCFC and HFC free practises throughout the Olympic site. (February, 2000)
 - K.5 Australia: "Green Olympics, Dirty Sponsors": report outlining how Olympic Sponsors Coca Cola and McDonald's were undermining the Environmental Guidelines because of their reliance on HFCs. (April, 2000)
 - K.6 Australia: "How Green the Games: Greenpeace's assessment of the Sydney 2000 Olympics": report examining the successes and failures of the original 1993 guidelines which specified "CFC, HCFC and HFC free refrigerants and processes" and summarises with a global best practice on Greenfreeze (September, 2000)
 - K.7 Australia: "Greenpeace Olympic Environmental Guidelines: a guide to sustainable events": (September, 2000)
 - K.8 UK: "A Commentary on Past and Future UK and EU HFC Emission Estimates by March Consultants": January 2000

APPENDIX E

Videos Produced by Greenpeace Ozone Campaign

1992:

- GPI: Impacts of ozone depletion in Chile.
- Greenfreeze: Using Hydrocarbons in Domestic Refrigeration

1998:

- "Back to The Future: Working Safely with Hydrocarbons": Co-produced by Greenpeace UNEP and GTZ. Video and accompanying training booklet "Back to the Future" is translated into all the UN languages.

1999

- "Cool Technologies: Working Without HFCs". Shot in ten countries, video demonstrates HFC-free cooling technologies in domestic and commercial refrigeration, transport cooling, mobile air-conditioning. Video shown at Joint IPCC/TEAP Expert Meeting Petten, The Netherlands (June 26-28, 1999)

FOOTNOTES

- 1 Annan, Kofi Report to the 53rd Session of the UN General Assembly (Item 58 “Strengthening of the UN System”, Document A/53/170, 10 July 1998)
- 2 Gupta, Joyeeta; Gagnon-Lebrun, Frédéric: “Non-State Actors in International Environmental Negotiations: Increasing transparency or creating confusion”
- 3 Edelman Public Relations Worldwide: Press Release: Dec. 1, 2000
- 4 For more in depth discussion, see: Greenpeace International, “The Greenpeace International Seminars on Safe Trade: The use of the Precautionary Principle in International Trade”: report of the seminars held in Seattle, December 1999 and in Geneva, March 2000, convened by Greenpeace International: July, 2000
- 5 As formulated by Dr. Allan Teramura, University of Hawaii, Manoa, (Discover, January, 1993).
- 6 See Appendix A for representative sampling of Greenpeace Ozone Campaign’s activities organized in chronological order in the following categories: Public Outreach & Policy Advocacy, Confronting Corporate ODS Producers and Market Intervention Solutions Campaigning
- 7 See Appendix D: listing of Greenpeace Ozone Campaign Publications in English
- 8 See Appendix E: listing of Greenpeace Ozone Campaign Video productions
- 9 It is somewhat arbitrary to categorize some campaign activities as “public outreach” in comparison to other campaign activities. In reality, the highly publicized nature of nearly all Greenpeace activities would place most Greenpeace initiatives into the “public outreach” category. See Appendix A.
- 10 See Appendix D: Greenpeace Ozone Campaign Publications: Documents C.3, C.6, C.8, E.4, F.3, F.11, I.2
- 11 See Appendix D: Greenpeace Ozone Campaign Publications: Documents A.1, A.2, A.3, C.9, C.12, D.1, E.1, F.5, F.7, F.9, G.1, G.3, H.4, I.10, J.2, J.3, K.3, K.4, K.8
- 12 See Appendix D : Greenpeace Ozone Campaign Publications: Documents B.1, C.2, C.4, C.5, D.3, D.6, D.7, E.2, E.5, E.6, E.8, E.9, E.10, F.2, F.4, F.8, F.9, H.1, H.5, I.6, I.7, J.1, K.1, K.2, K.5,
- 13 In 1993, for example, Greenpeace USA critically viewed the nomination of former US EPA Administrator to the Board of Directors of Du Pont.
- 14 See Appendix D: Greenpeace Ozone Campaign Publications: Documents C.1, C.10, C.11, C.12, D.2, D.4, D.5, D.8, D.9, E.3, F.1, F.6, F.10, G.4, H.2, I.1, I.4, I.5, I.8, I.9, K.1,
- 15 Greenpeace, “Greenfreeze: A Revolution in Domestic Refrigeration: A Greenpeace Solutions Based Campaign”: Greenpeace report prepared for Workshop of the central America, Mexico and Spanish Speaking Caribbean ODS Officers Network, 13-17 November, 1996, San Jose, Costa Rica

- 16 Greenpeace, "Saving the Ozone Layer — The Montreal Protocol and Moral Priorities": prepared for 9th MOP in Montreal: critiques the role of global chemical cartel in hijacking the MP and calls for the elimination of HFCs: (September, 1997)
- 17 Ibid.
- 18 Greenpeace, "No Excuses: A report on ozone and climate friendly technologies that documents why CFCs/HFCs are obsolete": prepared for the 7th MOP (October, 1995)
- 19 Greenpeace, Op.Cit, footnote #16
- 20 Ibid.
- 21 Ibid.
- 22 Greenpeace, "The Ozone Layer Destroyers: Whose Chlorine & Bromine Is It?": Inventory of ODS production from 1986-1995: assigning their proportional share of global ozone depletion by companies and countries: prepared for the 7 MOP (November, 1995)
- 23 Greenpeace, Op. Cit., footnote #10
- 24 Greenpeace, "How to Limit HFC/PFC/SF6 Emissions? Eliminate Them:" GP submission for the Joint IPCC/TEAP Expert Meeting Petten, The Netherlands critiques the pro-HFC bias of TEAP's experts, and provides inventory of HFC free technologies around the world. (June 26-28, 1999):
- 25 See Appendix A for representative sampling of Greenpeace campaign activities organized in a chronological order and in the following categories: Public Outreach & Policy Advocacy, Confronting Corporate ODS Producers and Market Intervention Solutions Campaigning.
- 26 See Appendix D: Greenpeace Ozone Campaign Publications: Documents # C.1, C.10, C.11, D.9, F.6, K.1
- 27 See Appendix D: Greenpeace Ozone Campaign Publications: Document # D.2
- 28 See Appendix D: Greenpeace Ozone Campaign Publications: Document # F.1
- 29 "Back to The Future: Working Safely with Hydrocarbons": Co-produced by Greenpeace UNEP and GTZ. Video and accompanying training booklet "Back to the Future" is translated into all the UN languages.
- 30 See Appendix A, section Market Solutions 1992, for further information on the development of Greenfreeze.
- 31 The use of hydrocarbons in domestic refrigeration predates the invention of the "miracle" compounds — CFCs — in the early '30s. In the United States, in the mid '30s, out of 60 different refrigerator brands, 11 used isobutane as refrigerant. The refrigerant charge in those refrigerators is estimated to have been approximately 1.5 kg (3.3 lbs), of isobutane. In comparison, today's hydrocarbon refrigerators, with hermetically sealed compressor systems, use between 30 to 70 grams (1-2.5 oz.) of refrigerant, depending on the size of the refrigerator. That is 20-50 times less refrigerant used under much safer conditions.

Making a Difference

- 32 "Back to the Future: A Technical Survey of Information Regarding Fluorocarbons Vs. Hydrocarbons in Domestic Refrigerators": reprinted in the GTZ 1995 Hydrocarbon Year Book. (January, 1995)
- 33 See Appendix B: Representative sampling of the Greenpeace Market Intervention Solutions Campaigning: Commercial Refrigeration
- 34 See Appendix C: Summary highlights of the Greenpeace campaign against the use of fluorocarbons at the Sydney 2000 Olympic Games
- 35 See Appendix D: Greenpeace Ozone Campaign Publications: Document K.5
- 36 See Appendix D: Greenpeace Ozone Campaign Publications: Document K.7
- 37 See Appendix D: Greenpeace Ozone Campaign Publications: Documents K.2, K.3
- 38 This representative sampling is not all inclusive of all the initiatives taken world wide by Greenpeace to protect the ozone layer.