



UNITED NATIONS ENVIRONMENT PROGRAMME
DIVISION OF TECHNOLOGY, INDUSTRY AND ECONOMICS



UNEP INTERNATIONAL EXPERT MEETING
ADVERTISING AND SUSTAINABLE CONSUMPTION

Paris, 21-22 January 1999

SUSTAINABLE PRODUCTION AND CONSUMPTION AT UNEP TIE

As the world population grows and resources are used beyond the earth's carrying capacity, leading to high waste yields and emissions into the atmosphere and water and inefficient use of natural resources, societies must reorient their consumption patterns and move towards cleaner and safer production.

The mission of the UNEP Division of Technology, Industry and Economics (TIE) is to help decision makers in government, local authorities and business to develop and adopt policies and practices to reach sustainable development that:

- are cleaner and safer;
- make efficient use of natural resources;
- ensure adequate management of chemicals;
- incorporate environmental costs;
- reduce pollution and risks for humans and the environment.

UNEP TIE activities focus on awareness raising, partnership development, information and technology transfer, capacity building, improving understanding of environmental impacts of trade issues, and integration of environmental considerations into economic policies.

UNEP TIE Production and Consumption (P&C) Unit in Paris, in particular, fosters the development of cleaner and safer production and consumption patterns that improve efficiency in the use of natural resources and reduce pollution thus improving a company's environmental performance and people's life-styles.

Sustainable production and consumption policies are two sides of the same coin and UNEP is addressing them in an integrated manner: "...Achieving sustainable development is a collective responsibility. Action to protect the global environment must include the adoption of improved sustainable consumption and production practices." , quote from the UNEP International Declaration on Cleaner Production, 1998.

UNEP Sustainable Production and Consumption activities apply a life cycle approach to consumers needs, focus on understanding the driving forces behind consumption – using them to inspire cost effective improvements, raising the quality of life and reducing environmental damage.

The main areas of sustainable consumption activity are:

- building tools;
- promoting dialogue
- developing strategies and actions for industrial and government consumption

UNEP TIE has a unique position to influence private and public policies on sustainable production and consumption issues around the world. All stakeholders need to be involved and business and industry are among the key partners along with government, consumers, and civil society.

UNEP TIE
39-43 Quai André Citroën
75739 Paris Cedex 15
France
Tel: +331 44 37 14 50
Fax: +331 44 37 14 74
<http://www.unepie.org>

Sustainable consumption logo: ©Design Helmut Langer, Germany

UNEP International Expert Meeting Advertising and Sustainable Consumption

Paris, 21-22 January 1999

This is the report of the United Nations Environment Programme's (UNEP) Division of Technology, Industry and Economics international expert meeting on "Advertising and Sustainable Consumption", held 21-22 January 1999 in Paris, France. The purpose of the meeting was to foster mutual understanding and co-operation on advertising and sustainable consumption among involved stakeholders.

This report is an attempt to record the key elements of the discussion. UNEP would like to thank all participants who openly shared their ideas and visions during the workshop.

Special thanks go to:

- Carl Duisberg Gesellschaft, the German Foundation for International Training and Development, for providing financial support.
- Dianne Dillon-Ridgley, Women in Environment and Development (WEDO), for the excellent, independent facilitation.
- The secretariat of the UN Commission of Sustainable Development for its ongoing support.

TABLE OF CONTENTS

1. Introduction	5
1.1 Background.....	5
1.2 Meeting objectives.....	5
1.3 Participants.....	6
2. The Sustainable Consumption Agenda	6
2.1 Conceptual framework.....	6
2.2 Clarifying sustainable consumption.....	7
2.3 Consumption ‘realities’ to keep in mind.....	8
2.4 Opportunities to promote sustainable lifestyles.....	8
3. The Role of Advertising	9
3.1 Clarifying advertising.....	9
3.2 Advertising ‘realities’.....	9
3.3 Opportunities for a proactive advertising sector.....	10
4. Moving Forward	11
4.1 To change advertising behaviour:.....	11
4.2 To change client behaviour:.....	12
4.3 To change consumer behaviour:.....	12
4.4 To change the policy framework:.....	13
5. Conclusions	13
 Appendices:	
Appendix 1: List of Participants.....	14
Appendix 2: Background Document.....	19
Appendix 3: Some Key Documents.....	27
Appendix 4: About the UNEP Division of Technology, Industry and Economic.....	28

1. INTRODUCTION

1.1. Background

For over twenty-five years, UNEP has worked closely with a wide range of industry sectors, from mining and chemicals, to tourism and financial services. Together, much progress has been made in introducing environmental considerations in these sectors for cleaner production and environmental management. Much work still needs to be done, but it is now evident that sustainable development will not be achieved if sustainable production improvements are overtaken by unsustainable consumption patterns. Current consumption patterns are unsustainable because they would overwhelm the earth's resources and absorptive capacity if adopted by all the world's citizens.

The advertising sector is widely known to have creative talents and expertise that help shape consumer choices. Such creativity is needed in helping society to achieve sustainable consumption patterns. Recognition of this need is reflected in the international community's recommendation at the 1997 meeting of the UN Commission for Sustainable Development "to encourage business, the media, advertising and marketing sectors to help shape sustainable consumption patterns".

1.2 Meeting objectives

Aware of a number of inter-related but scattered initiatives addressing advertising and sustainable consumption in a number of organisations and countries, UNEP felt it was timely to host a first meeting of experts to:

- improve mutual understanding of the advertising sector and sustainable consumption agenda;
- take stock of existing advertising and sustainable consumption initiatives; and to
- identify needs for action and explore prospects for partnerships for sustainable consumption.

A background paper for the meeting provided a general overview of the milestones in understanding the concept of sustainable consumption and scoped out some of the advertising issues and opportunities to achieve more globally sustainable consumption patterns. It specified five questions to be addressed at the meeting:

1. Do advertising agencies have a role in promoting sustainable consumption?
2. What actions to promote sustainable consumption by advertising agencies can be developed either building on existing initiatives or on new ideas?
3. What other issues need to be addressed?
4. What organisations should be involved?
5. What role should UNEP play to promote and facilitate action by advertising agencies to promote sustainable consumption?

1.3 Participants

The meeting was attended by forty experts from the advertising sector – companies and industry associations, consumers groups and non-governmental organisations (NGOs) from developed and developing countries, as well as representatives of the UN Commission for Sustainable Development (CSD), the World Business Council for Sustainable Development (WBCSD), the Organisation for Economic Co-operation and Development (OECD), the United Nations Education, Science and Culture Organisation (UNESCO), and UNEP.

“I like the spirit of the meeting because it is about what we can do instead of talking about what should be banned” Stig Carlson, Director General, European Association of Advertising Agencies

for Economic Co-operation and Science and Culture Organisation

2. THE SUSTAINABLE CONSUMPTION AGENDA

The first morning of the meeting focussed on obtaining a common, general understanding of sustainable consumption. No formal presentations were made as the emphasis throughout the meeting was on dialogue. However, short introductory remarks to set the stage for the discussions were made by Bas de Leeuw, UNEP TIE, Peter Hindle, representing Proctor and Gamble, and Erik Brandsma, UN Commission for Sustainable Development.

“Most people in Brazil don’t know what sustainable consumption means. What message should I take back? Please help me communicate the right message.” Ricardo Carvalho, President, Communication for the Environment, Brazil

2.1 Conceptual framework

No attempt was made to reach a consensus on the precise meaning of sustainable consumption as it was felt that it was time to focus discussions on action rather than on definitions. Existing definitions were generally accepted as providing basic understanding of the concept of sustainable consumption. These are:

- **Brundtland definition of sustainable development** (Our Common Future (WCED, 1987):
“...Development which meets the needs of the present without compromising the ability of future generations to meet their own needs.”
- **CSD-adopted definition of sustainable consumption**
“The use of services and related products which respond to basic needs and bring a better quality of life while minimising the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle so as not to jeopardise the needs of future generations.”

United Nations Development Programme conceptualisation of consumption (UNDP, Human Development Report, 1998)

“Consumption should be:

- *Shared: ensuring basic needs for all;*
- *Strengthening: building human capabilities;*
- *Socially responsible: the consumption of some should not compromise the wellbeing of others; and*
- *Sustainable: without mortgaging the choices of future generations.”*

- **WBCSD concept of sustainability.** (Sustainability through the Market, WBCSD Report to UN CSD, December 1998):

“Sustainability requires that the whole lifecycle of products and services be considered, from the extraction of raw materials, through manufacture, distribution and use to waste management, which includes recovery and recycling. The primary contribution of business to overall sustainability is to provide the products and services that improve people’s lives. Individual businesses also contribute by the way they operate in providing these products and services, by considering the environmental, economic and social aspects of their own operations. Since environmental, social and economic aspects run throughout the product or service lifecycle, there will be considerable inter-dependence of businesses in managing these responsibilities.”

“Consumers in Thailand are not so concerned about sustainable consumption– it’s too far from their lives. It has to be narrowed down to individual benefits, like shutting off unnecessary energy will save you money.” Suraphon Leenirundon, Thai Hakuodo Co Ltd, Thailand

The discussion that followed provided clarity on the conceptual meaning of sustainable consumption, important realities of consumption that need to be kept in mind, and some opportunities for promoting sustainable lifestyles.

2.2 Clarifying sustainable consumption

- **Sustainable consumption is a part of the sustainable development agenda, but it is also important in its own right.** Without a specific focus on sustainable consumption, companies, for example, may continue to focus solely on sustainable production while their marketing and advertising practices may undermine any environmental improvements made.

“The discussion has very usefully moved from advertising environment products (most environment claims are for promoting the product, not for the environment) to lifestyle changes.”
Anna Fielder, Consumers International.

- **Sustainable consumption is about lifestyle changes and how to consume differently.** Sustainable consumption is about more than the environment, more than ‘green consumption’, more than eco-efficiency and cleaner production. It addresses basic needs, equity and other social concerns. It is about current generations and future generations.

- **The words chosen when communicating sustainability messages are important.** Concepts such as ‘quality of life’, ‘standards of living’, ‘economic value’, ‘ethical value’, ‘social value’, etc. mean different things although they are often used indiscriminately. Words carry weight and prompt different reactions.

2.3 Consumption ‘realities’ to keep in mind

- **80% of consumption is in the north. 50% of consumers are in urban areas in both developing and developed countries.**
- **Performance and value are the two key influencing factors in consumer purchases.** To change consumer habits, environment and social factors can not replace these factors, but must complement them.
- **Consumption is culturally determined.** Consumption has become a part of culture. The culture of the home, for example, has become an increasingly materialistic one.

2.4 Opportunities to promote sustainable lifestyles

- **Consumer aspirations are increasingly similar in urban centres around the world in developed and developing countries.** It is in urban areas that future consumer trends are often set. A focus on consumption patterns in urban areas, rather than on north/south differences, could provide a useful platform for exploring how to implement advertising initiatives for sustainable consumption.
- **Ecological thinking is on the rise.** More and more people are concerned about the environment and have started to integrate environment and other sustainable development considerations into their consumer choices. Health, for example, is an increasingly cited criteria for consumers (in the Netherlands, demand for organic food has doubled over the last five years). Specific societal issues (e.g. crime, violence, urban stress, child labour) may also provide important opportunities to promote sustainable consumption.
- **Long-term changes do not necessarily take long.** Lifestyles have changed rapidly over the last twenty years. People’s attitudes and behaviour adapt to changing circumstances and new information (e.g. smoking is bad for your health). Long-term changes in consumption patterns may not be as difficult as some people think.

3. THE ROLE OF ADVERTISING

The meeting focused on getting a better understanding of the impact and limits of advertising in influencing consumer behaviour, and how the advertising sector can contribute to other sustainable development efforts. Introductory remarks were provided by Karl Greven, Leo Burnett, an advertising agency based in USA and many other countries, Mitchell Bates, St Lukes, an advertising agency based in the UK, Pierre Huppert, an advertising consultant, Netherlands, and Dianne Dillon-Ridgeley, representing WEDO, USA. The discussion that followed helped clarify the role of advertising as part of a broader communication spectrum. It also revealed differences in the perception of advertising's influence on consumption patterns. Despite these differences, however, participants identified a number of opportunities that would help make the advertising sector a key partner for sustainable development.

“Our business customers view us as experts in the environmental advertising field. If they ask us what they should do in advertising their products, we say ‘never lie’, so they have to begin the environmental management process. Creative people unconsciously project their own values. We need to accept our own responsibility, not hide behind our clients and shun our moral ethics as people.”

Taina Marjanen,
Brand Sellers DDB RIO, Finland

3.1 Clarifying advertising

- **Advertising is only one element of a broader communication spectrum.** Marketing, media, entertainment, schools, public information etc. are also important communication elements in influencing consumption trends.
- **Advertising for sustainable consumption means more than advertising environmental products.** It means communicating lifestyle changes that are desirable to people.

3.2 Advertising ‘realities’

- **Advertising alone is not enough to change consumer behaviour.** Good, sustainable services and products have to be available to consumers. Advertising is nonetheless needed to stimulate and steer consumers towards sustainable products and services.
- **Advertising contributes to setting consumer trends and aspirations.** Stakeholders outside the advertising sector credit the advertising sector with greater influence on long-term consumer behaviour than advertising professionals do. Advertising targeted at children and adolescents was cited as one example of how advertising can influence life-long consumer habits.

“Research that we did last year showed that advertising is very important to consumers’ decision-making. We also found that advertising staff in Asian countries were often unaware of industry codes of conduct.” Kim Jaiok,
Executive Director, Citizens Alliance for
Consumer Protection of Korea.

- **The influence of advertising may be greater in setting consumer aspirations and consumption levels in emerging markets than in mature, saturated markets.** Urban poor in developing countries often have television before access to clean water. But even in mature markets, advertising influence consumer choices, and can lead to lifelong consumer habits.
- **More advertising excitement can be generated among the advertising profession by focusing on what can be done rather than what should be banned.** Incentives are more efficient than restrictions or bans in steering advertising towards social goals. (This does not mean, however, that measures to dissuade misleading or dishonest advertising practices should not be developed).

3.3 Opportunities for a proactive advertising sector

- **The advertising profession has unique communication talents and in-depth knowledge of consumer behaviour.** Such talent and knowledge has been missing from sustainable development efforts to date (with a few exceptions, such as the Netherlands where extensive research on the role of persuasive communication in shaping attitudes and behaviour towards environmental issues has been put into use). This provides a window of opportunity for the advertising sector to quickly become a major player in sustainable development.

“ Brand image is heavily influenced by your social image - one of the most important challenges business is facing. Brands will be important in setting social and political issues as traditional government fails. Any good advertising agency giving advise to a company has to include ecological issues because customers are demanding more active stands on social and environmental issues. ” Pierre Huppert, Advertising Consultant, Netherlands

- **Opportunities for advertising agencies to stimulate the development of sustainable products and services are increasing.** Advertising is about building bridges between consumer needs or wants and a company’s products or services. Advertising agencies able to advise clients about how to integrate sustainability into the company’s public image and ‘brand equity’ will become increasingly valuable to corporate clients.
- **Environmental initiatives by the advertising sector and other stakeholders already exist.** Some may benefit simply from getting wider recognition, being updated or consolidated (e.g. industry guidelines or codes of conduct). Others may reveal important lessons and past experiences that would be useful for a broader mobilisation of the advertising community. Participants identified a wide range of ongoing initiatives including :

- Self-regulatory advertising initiatives and codes of conduct. They can demonstrate industry intentions and promote environmental awareness, although many stakeholders frequently see actual implementation as weak.
- Consumer watchdog activities. Although frequently under-resourced, they are widely seen as useful in helping to identify any advertising practices that

“ We have to be careful about self imposed codes of conduct. There is a fine line between policing and pleasing yourself. Advertising is a ruthless industry. Part of the challenge is breaking the rules.” Ken Dixon, St Lukes,UK

mislead consumers and hurt the public image and credibility of the industry as a whole.

- Government-sponsored television advertisements. In Thailand, for example, government-sponsored advertisements used humour to encourage consumers to reduce energy and water consumption.
- Internet forums. As an immediate follow-up to this meeting, participants from a Brazilian NGO, Com-Mam, used its Internet site for journalists and other professionals looking for information on environmental issues, to open a news group dealing specifically with advertising and sustainable consumption (add_consumers@egroups.com).
- Awards in best practice environmental management, marketing and advertising.
- Independent ecolabelling schemes.
- **The advertising profession is reviewing its credibility, future and social role.** A number of advertising and marketing firms exist and would be receptive to discussing sustainable development.

4. MOVING FORWARD

Participants shared ideas on how to move from talk to action. Suggestions focussed on actions targeting the advertising sector itself, its corporate clients, consumers, and policymakers.

4.1 To change advertising behaviour:

- ***Sustainable consumption ‘brief’ for advertisers.*** Participants expressed the need to and interest in developing a “sustainable consumption” brief that would help the advertising sector to understand questions like ‘what is a sustainable lifestyle?’ and ‘what is the profile of a sustainable consumer?’
- ***Develop a sustainable consumption campaign within the advertising industry.*** It was suggested that the advertising sector use its own creative talents to change the sector from within. Advertising trade magazines would probably give free space for such a campaign.
- ***Green housekeeping in the advertising industry.*** Participants expressed the need to develop (or adapt) environmental checklists or guides on reducing in-house environmental impacts within the industry. The UNEP Cleaner Production Declaration could help provide principles which advertising agencies could consider.
- ***Integrating the message in existing advertising for a.*** The European Association of Advertising Agencies offered to help spread the message. A Thai advertising agency will

look at how to include the sustainable consumption message at an Asian congress of advertising professionals in November 1999.

- ***Report back and involve other important advertising actors.*** Other important actors need to be involved in moving forward, for example, the World Federation of Advertising and the International Association of Business Communicators.
- ***Internet advertising and sustainable consumption news group.*** COM-MAM (Brazil) will open an international advertising and sustainable consumption news group on its website.
- ***Environmental / sustainable development reporting.*** Advertising agencies could be encouraged to take the first steps to compile environmental or sustainable development reports.
- ***International award on best advertising campaign for sustainable consumption.*** Publicity from an awards scheme could motivate advertising professionals to donate free time to develop creative campaigns for social goals.
- ***International sustainability network of advertising professionals.*** A network would facilitate the exchange of concepts, creativity and experiences.

4.2 To change client behaviour:

- ***Help business clients see sustainability as an integral component of social reputation and brand management.*** Use in-house magazines and other opportunities to communicate long-term sustainability aspects of corporate credibility and brand image to business clients.
- ***Integrate advertising issues into the agenda of business social responsibility associations.*** One idea was to create a separate advertising association for social responsibility that would consider sustainable development issues.

4.3 To change consumer behaviour:

- ***Select three to five demonstration cities.*** Participants supported the idea of pilot advertising campaigns in pilot urban centres to promote sustainable lifestyles, which would involve the advertising sector, city management, civil society, and UNEP and other UN initiatives and would measure consumer behaviour changes.
- ***Incorporate consumer behaviour experts early.*** The knowledge and expertise of the consumer research profession should be sought to identify and measure consumer responses to sustainable lifestyle advertising.

4.4 To change the policy framework:

- **Help governments identify and maximise positive incentives.** Governments have the important role of setting the regulatory framework and providing incentives for positive advertising. One incentive could be to offer lower media costs for sustainable advertising on public channels.

“ Instead of decreasing advertising during programmes on public television, perhaps government could look at diverting advertising space to sustainable products and services which companies would pay for.” Jeanne Bloch, Rouge, France

5. CONCLUSIONS

The informal nature of the meeting generated a friendly, co-operative atmosphere that was appreciated by the advertising industry and other participants. UNEP will continue its discussions of co-operation with the advertising sector and other stakeholders. Specific commitments include:

- Supporting informal networks to communicate sustainable consumption within the advertising and businesses sectors and to help structure and guide future UNEP activities in this field.
- Collecting and documenting existing efforts to promote sustainable consumption in advertising and business in developed and developing countries.
- Supporting the advertising sectors efforts to develop and implement ‘green’ housekeeping activities, drawing from UNEP TIE work (e.g. Cleaner Production Declaration and environmental reporting).

APPENDIX 1: LIST OF PARTICIPANTS

NAME	ORGANIZATION	ADDRESS	1. PHONE 2. FAX 3. EMAIL
Mr Bernhard Adam	Carl Duisberg Gesellschaft (CDG)	Lützowufer 6-9 D-10785 Berlin GERMANY	49 3025482 257/125 49 3025482 103 GrE11-Gast@CDG.DE
Mrs Jacqueline Aloisi de Larderel Director	UNEP TIE	39-43 Quai André Citroën 75739 Paris Cédex 15 FRANCE	33 1 4437 1450 33 1 4437 1474 j.aloisi@unep.fr
Mr. Gerard Bartels	Dutch Ministry of Environment	Ministerie VROM, DVEB/IPC 120 Postbus 20951 2500 EZ Den Haag THE NETHERLANDS	31 70 339 3953 31 70 339 1144
Mr Mitchell Bates	St Lukes	22 Dukes Rd WC 1H 4AB London UK	44 171 380 8888 mbates@Stlukes.co.uk
Mr Fritz Balkau Chief Production and Consumption Unit	UNEP TIE	39-43 Quai André Citroën 75739 Paris Cédex 15 FRANCE	33 1 4437 1439 33 1 4437 1474 fritz.balkau@unep.fr
Ms Jeanne Bloch	Rouge	78 Champs Elysées 75008 Paris FRANCE	33 1 5669 1920 33 1 5669 1929 jbloch@club-internet.fr
Mr Erik Brandsma	UN/CSD	UN Room DC2-2286 Two UN Plaza NY 10017 New York USA	1 212 963 0013 1 212 963 4260 Brandsma@un.org
Mr Stig Carlson Director General	European Association of Advertising Agencies (EAAA)	5 Rue Saint-Quentin B-1000 Brussels BELGIUM	322 280 1603 322 230 0966 stig.carlson@eaaa.be

NAME	ORGANIZATION	ADDRESS	1. PHONE 2. FAX 3. EMAIL
Mr Ricardo Carvalho President	COM-MAM (Communication for the Environment)	Rua Bento de Andrade 304 Cep 04503-000-jd Paulista – Sao Paulo BRAZIL	55 11 884 1417 55 11 885 1009 ricardo@meioambiente.org.br
Ms Garrette Clark	UNEP TIE	39-43 Quai André Citroën 75739 Paris Cédex 15 FRANCE	33 1 4437 1420 33 1 4437 1474 garrette.clark@unep.fr
Ms Clare Cocault	UNEP TIE	39-43 Quai André Citroën 75739 Paris Cédex 15 FRANCE	Clarecoco@aol.com
Ms Francesca van Dijk	SustainAbility Ltd	49-53 Kensington High Street W8 5ED London UK	44 171 937 9996 44 171 937 7447 vandijk@sustainability.co.uk
Ms Dianne Dillon-Ridgley	Citizens Network for Sustainable Development Interface/US President-s Council for Sustainable Development	P O Box 2982 Iowa City, Iowa 52240-2982 USA	1 319 338 1986 1 319 338 2090 ddr@wedo.org
Mr Ken Dixon Strategic Planner		31 Batoum Gardens W6 7QB London UK	44 171 602 1961 dixon.vandijk@btinternet.com
Ms Françoise Duchézeau Déléguée Générale à l'Écologie Urbaine et au Développement Durable	RATP	LAC A8A – 54 Quai de la Rapée 75599 Paris Cédex 12 FRANCE	33 1 4468 3281 33 1 4468 3040 francoise.duchezeau@ratp.fr
Ms Anna Fielder Programmes Director	Consumers International	24 Highbury Crescent London N5 1RX UK	44 171 226 6663 44 171 354 0607 afielder@consint.org

NAME	ORGANIZATION	ADDRESS	1. PHONE 2. FAX 3. EMAIL
Mr Teddy Follenfant	BFM Radio	43 rue Marius Jacotot 92800 Puteaux FRANCE	33 1 4125 1900/43480102 33 1 4125 1950
Mrs Elaine Geyer-Allely	OECD Environment Directorate	2 rue André Pascal 75775 Paris Cédex 16 FRANCE	33 1 4524 7936 33 1 4524 7876 elaine.geyer-allely@oecd.org
Dr Oliver Gray Director General	EASA/AEEP (European Advertising Standards Alliance)	10A rue de la Pépinière 1000 Brussels BELGIUM	322 513 7806 322 513 2861 library@easa-alliance.org
Mr Karel Greven	Leo Burnett	Buitenvelderstelaan 106 Amsterdam 1081 AB THE NETHERLANDS	31 2050 46161 31 2050 46131 micky.schwarz@nwleoburnett.nl
Ms Lisa Gunn	COM-MAM (Communication for the Environment)	Rua Bento de Andrade 304 Cep 04503-000-jd Paulista – Sao Paulo BRAZIL	55 11 884 1417 55 11 885 1009 lisa@meioambiente.org.br
Mr Peter Hindle Director Worldwide Technical Policy	BVBA Procter & Gamble Europe SPRL	Temselaan 100 B-1853 Strombeek, Bever BELGIUM	322 456 2458 322 456 2849 Hindle.p@pg.com
Mr Pierre Hupperts Advertising Consultant		Prof. Ritzema Boslaan 77 3571 CN UTRECHT THE NETHERLANDS	31 30 276 3081 31 30 271 6992 p.hupperts@phvisie.nl
Ms Kim Jaiook Executive Director	Citizen=s Alliance for Consumer Protection Korea	603 Pierson Bld 89 Sinmun-Ro 2GA, Chongro-Ku K P O Box 411 Seoul REPUBLIC OF KOREA	82 2 739 5441, 5530 82 2 736 5514 CACPK@Chollian.Dacom.Co.Kr
Mr Pradeep Kakkar Founder-Member	PUBLIC (People United for Better Living in Calcutta)	11, Hindustan park Calcutta 700 029 INDIA	91 33 4631422 91 33 4642921 public@cal2.vsnl.net.in

NAME	ORGANIZATION	ADDRESS	1. PHONE 2. FAX 3. EMAIL
Mr Suraphon Leenirundon General Manager/Business Unit 1	Thai Hakhodo Co Ltd	12 th Floor, Diethelm Tower B 93/1 Wireless Rd. Pathumwan Bangkok 10330 THAILAND	662 256 7007 662 256 7017-8/719 6682 suraphon@box1.a-net.net.th
Mr Bas de Leeuw Senior Advisor Sustainable Consumption	UNEP TIE	39-43 Quai André Citroën 75739 Paris Cédex 15 FRANCE	33 1 4437 3009 33 1 4437 1474 bas.leeuw@unep.fr
Dr Markus Lehni Program Manager	WBCSD	160 Route de Florissant 1231 Conches SWITZERLAND	41 22 839 3184 41 22 839 3131 Lehni@wbcsd.ch
Ms Taina Marjanen Account Director	Brand Sellers DDB RIO	Tehtaankatu 29A 00150 Helsinki FINLAND	358 9584 58158 taina.marjanen@bsddb.fi
Ms Isabella Marras Junior Professional Officer	UNEP TIE	39-43 Quai André Citroën 75739 Paris Cédex 15 FRANCE	33 1 4437 1421 33 1 4437 1474 Isabella.Marras@unep.fr
Mr Matti Naar Marketing Manager	IKEA Ltd	250 North Circular Road London NW 10 0JQ UK	44 181 2332300 44 181 4512813 matti.naar@memo.IKEA.com
Drs Wil J A Nelissen	R & M Research and Marketing	P O Box 992 6200 AZ Maastricht THE NETHERLANDS	W.Nelissen@randm.nl
Mr Gustavo Lopez Ospina Director Transdisciplinary Project Education for a Sustainable Future	UNESCO	7 Place Fontenoy 75353 Paris 07 SP FRANCE	33 1 4568 0868 33 1 4568 5635 g.lopez@unesco.org

NAME	ORGANIZATION	ADDRESS	1. PHONE 2. FAX 3. EMAIL
Mr François Pitron Senior Advisor on International Environmental Projects	Coca Cola	11 rue Leblanc 75015 Paris FRANCE	33 1 4060 2658 33 1 4060 2989 fpitron@eur.ko.com
Ms Florence Ranson Secretary General	European Advertising Tripartite	Avenue de Tervuren 267 1150 Brussels BELGIUM	32 2 779 2130 32 2 772 8980 eat.sec.gen@infonie.be
Mr Rémy Souchon	3 Suisses	12 Rue de la Centenaire 59963 Croix-Cédex FRANCE	33 3 2020 2501 33 3 2020 2311 rsouchon@3suisses.fr
Mr Martin Standley	GRIP-Centre for Sustainable Production and Consumption	P O Box 8100 Dep N-0032 Oslo NORWAY	47 2257 3600 47 2268 8753 standley@online.no
Dr Peter White	Global Technical Policy Dept Procter & Gamble	P O Box Forest Hall No.2, Whitley Rd Longbenton Newcastle upon Tyne NE 12 9TS UK	44 191 279 1508 44 191 279 2871 White.pr@pg.com
Mr Hal Wilhite	University of Oslo	15 bis Rue de Pot de Fer 75005 Paris FRANCE	33 1 4535 3446 33 1 4535 3446(auto switch) hwilhite@compuserve.com
Mr Nicola Zanardi	XYZ University of Siena (1)	XYZ via Giulia, 66 I-00186 Roma ITALY	39 06688 92787 XYZ.roma@xyzcomm.com

APPENDIX 2: BACKGROUND PAPER

UNEP International Expert Meeting Advertising and Sustainable Consumption

Paris, 21-22 January, 1999

UNEP initiated this meeting to explore the possibilities for an initiative on advertising and sustainable consumption, improving the understanding of the potential of the advertising sector in addressing the sustainable consumption agenda, and defining options for joint initiatives to achieve this end.

The meeting will help find the answers on the following questions:

- 1. What is the role of advertising agencies in working towards sustainable consumption?*
- 2. What initiatives and actions to help achieve the goals of sustainable consumption are already going on in the sector?*
- 3. What barriers exist and what incentives are missing, that hinder further actions?*
- 4. What organizations could influence the barriers and incentives and should be involved in next steps?*
- 5. What options exist to go forward with an initiative on sustainable consumption in the advertising sector?*

This background paper is meant to be an introduction for such a discussion. Participants can use it to help them get a first, or refreshed feeling, about the subject. It is not meant to be a comprehensive study of the subject. In fact it may bring to light the need to prepare such a study.

The structure of the document is as follows: after the introduction (section 1), the current status of international work on sustainable consumption is presented (section 2), followed by the issues seen from the perspective of the advertising sector (section 3). A short list of references is attached in an appendix.

1. Introduction

The United Nations Environment Programme's Division of Technology, Industry and Economics (UNEP TIE) has a unique vantagepoint of emerging activities on business and sustainable development issues around the world. UNEP has been active in addressing the issue of changing consumption and production patterns, through a number of programmes such as Cleaner Production, Industrial Pollution Management, Tourism and Energy.

There is a consensus around the world that current patterns of consumption are unsustainable, that we need to change those patterns and that both actions at the supply side and the demand-side are needed.

The role of advertising agencies – in collaboration with marketing professionals from business and the media – is one of the keys to bring the changes about. Advertising links consumption with production, and can build a bridge between the concepts of cleaner production and sustainable consumption.

In 1997, at a special session of the United Nations General Assembly ("Earth Summit +5") governments identified sustainable production and consumption and poverty reduction as the "overriding priorities" for actions in the year ahead. One of the recommendations from Earth Summit +5 was:

"Encourage business, the media, advertising and marketing sectors to help shape sustainable consumption patterns."

Aware of the potential benefits, we find it timely to consider an UNEP advertising initiative, similar to the successful initiatives already developed with the insurance and banking sectors.

2. The sustainable consumption agenda

The need to address sustainable consumption issues at the global level appeared on the policy agenda in 1992, when “Agenda 21” was formulated:

“The major cause of the continued deterioration of the global environment, is the unsustainable pattern of consumption and production. Special attention should be paid to the demand for natural resources generated by unsustainable consumption and to the efficient use of those resources consistent with the goal of minimizing depletion and reducing pollution. Excessive demands and unsustainable lifestyles among the richer segments of humanity place immense stress on the environment. The poorer segments, meanwhile, are unable to meet food, health care, shelter and educational needs. Action is needed to meet the following broad objectives:

- (a) To promote patterns of consumption and production that reduce environmental stress and will meet the basic needs of humanity;
- (b) To develop a better understanding of the role of consumption and how to bring about more sustainable consumption patterns.”

Since then a number of activities have been undertaken by governments (including Norway, the Republic of Korea, Brazil and The Netherlands), business (including World Business Council for Sustainable Development, WBCSD), non-governmental organizations (including Consumers International, and Friends of the Earth) and international organizations (including OECD, UNDP, UNEP). Progress has been reported at the annual meetings of the United Nations Commission for Sustainable Development (CSD). The activities have contributed to a better understanding of the issue, as will be shown in the following sections.

2.1 What is sustainable consumption?

In the international work programme on sustainable consumption and production patterns of the United Nations, adopted by the CSD in 1995, sustainable consumption has been defined as:

“The use of services and related products which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle so as not to jeopardize the needs of future generations.”

The current debate about what sustainable consumption is, includes aspects other than the environment. One usually takes into account economic and human development (raising the living standard of the poor, especially in developing countries) and social issues.

The United Nations Development Programme (UNDP, Human Development Report, 1998) described consumption as having the following attributes:

- *Shared*: ensuring basic needs for all;
- *Strengthening*: building human capabilities;
- *Socially responsible*: the consumption of some should not compromise the wellbeing of others; and
- *Sustainable*: without mortgaging the choices of future generations.

Some milestones events developing the sustainable consumption agenda

<i>Year</i>	<i>Organization</i>	<i>Title</i>	<i>Location</i>
1992	UNCED	Earth Summit/Agenda 21	Rio de Janeiro, Brazil
1994	UNEP	High-level Seminar on Cleaner Production	Warsaw, Poland
1995	Min. Environment Norway	Ministerial Roundtable: Conference on Sustainable Production and Consumption	Oslo, Norway
1995	Min. Environment, Republic of Korea	Workshop on Policy Measures for Changing Consumption Patterns	Seoul, Republic of Korea
1995	Min. Environment, The Netherlands	Facilities for a Sustainable Household	Zeist, The Netherlands
1995	OECD	Clarifying the Concepts	Rosendal, Norway
1995	UN CSD	3 rd session UN CSD	New York, USA
1997	UN	Earth Summit+5	New York, USA
1998	Min. Environment, Norway	Consumption in a Sustainable World	Kabelvag, Norway
1998	UNDP	Launch of Human Development Report	The Hague, The Netherlands
1998	UNEP	High-level Seminar on Cleaner Production	Phoenix Park, Republic of Korea

2.2. Who should be involved in promoting sustainable consumption?

Based on numerous international workshops, it became clear that realizing the goals of sustainable consumption is not something that can be achieved by the consumer alone. It's a shared responsibility and all actors (governments, business, non-governmental organizations) must play their roles.

Consumers might be expected to change their life-styles and take the environment into account in their day-to-day decisions. But in order to do so without too much cost (in terms of money, time and comfort), they need:

- the right information;
- the facilities;
- the infrastructure;
- the financial incentives;
- the products and services.

Providing this kind of "facilities to change" is something that most of all governments, business and ngo's can do:

- **Governments** can design and implement adequate infrastructure and legislative, financial and institutional incentives;
- **Business** can develop adequate goods and services and provide appropriate information;
- **Non-governmental organizations** can inspire and facilitate action.

Concerning the role of business, sustainable consumption requires greater awareness raising and development of tools and concepts to take action. Meeting the needs of the consumers on a more sustainable way thereby should be attractive for all companies. Awareness raising has been done, among others, by the World Business Council for Sustainable Development.

“ ... new opportunities will emerge as market dynamics change. Those companies who engage in the debate can anticipate future demand and be on the leading edge of changed consumption patterns. As first-movers, they will be able to seize the new opportunities and gain a competitive advantage.”

World Business Council for Sustainable Development, 1998

Developing and supplying information, tools and training for business in both developed and developing countries is something that, among others, UNEP is working at through the successful Cleaner Production Programme, a preventive environmental strategy applied to processes, products and services.

In UNEP's High-Level Seminar on Cleaner Production in Warsaw, Poland, 1994, it was concluded that innovative companies were already developing many activities, for instance by steering ecodesign towards the generation of new products and services and rethinking the way consumers obtain products (e.g. leasing versus purchasing).

During UNEP's High-Level Seminar on Cleaner Production in the Republic of Korea (1998) the ***International Declaration on Cleaner Production*** was launched. Many key stakeholders signed, thereby committing themselves to providing leadership to encourage the adoption of sustainable production and consumption practices through their relationships with stakeholders. They also committed themselves to create *“innovative solutions by supporting the development of products and services that are environmentally efficient and meet consumers needs.”*

Business in general has a key role to play in working towards sustainable consumption and many initiatives are underway.

2.3 Why is the advertising sector being addressed?

The CSD international work programme, of which the progress will be reviewed in the 7th session in April 1999 in New York, has the following elements:

- *identifying the policy implications of projected trends in consumption and production patterns;*
- *assessing the impacts on developing countries of changes in consumption and production patterns in developed countries;*
- *evaluating the effectiveness of policy instruments;*
- *eliciting time-bound voluntary commitments from countries to make measurable progress;*
- *revising the Guidelines for Consumer Protection.*

Many people and organizations involved in the debate so far, including UNEP, are becoming more action-oriented. This requires not only greater clarity about what sustainable consumption is all about, but also involvement of the right actors, and finding the underlying incentives to take action.

For instance, in a recent international workshop “Consumption in a Sustainable World”, organized by the Norwegian government (1998) and to be reported to the 1999 session of the CSD, it was concluded that:

“ ... the goal of sustainable consumption is starting to move out of the conference hall and into communities and the marketplace (...) Sustainable consumption initiatives need to go beyond moral exhortation and demonstrate the value that sustainable consumption brings. For rich individuals and companies this will include environmental, health, financial, security and corporate reputation benefits. For the poor it has to mean that real alternatives which improve quality of life are made accessible and affordable.”

In this same meeting – and referring also to the recommendation of Earth Summit+5 (“... encourage business, the media, advertising and marketing sectors to help shape sustainable consumption patterns”) -UNEP and other international organizations were encouraged to explore the role of marketing and media in promoting sustainable consumption.

UNEP then discussed the role of marketing and media in its High-Level Seminar on Cleaner Production, (Republic of Korea, 1998) and concluded that marketing and the media could play an important role to bridge the concepts of

cleaner production and sustainable consumption. Producers, who have to meet consumers needs effectively and sustainably, need an understanding both of what consumers want and how to deliver this in environmentally sound ways. Business, in its advertising efforts, has to decide whether to promote the environmental attribute or other aspects of a product (safety, health, status, comfort, quality).

Participants called upon UNEP and other international organizations to explore further the role the advertising sector can play in promoting sustainable consumption.

3. The role of advertising in promoting sustainable consumption

3.1 Introduction

The 1998 UNDP Human Development Report points to the fact that advertising is a \$ 435 billion business with global expenditures (including in developing countries) increasing faster than the world economy, suggesting that the sector is becoming one of the major players in the development patterns.

The spread of advertising to the developing world – top 10 countries in advertising expenditure as a share of GDP, 1996

<i>Country</i>	<i>Advertising as a percentage of GDP</i>	<i>Education as a percentage of GDP</i>	<i>Total advertising expenditure (US\$ billions)</i>
Colombia	2.6	3.4	1.4
United Kingdom	1.4	5.5	16.6
New Zealand	1.4	6.4	1.0
Hong Kong, China	1.4	2.8	2.2
Korea, Rep. Of	1.4	3.7	6.7
Venezuela	1.4	5.0	1.0
USA	1.3	5.4	101.2
Taiwan, China	1.2	...	3.4
Brazil	1.2	...	8.2
Australia	1.2	5.4	4.7

Source: UNDP Human Development Report, 1998

The size of expenditures on advertising indicates the potential influence of advertising in shaping consumption patterns, when compared also with factors like education.

“... advertising is expanding rapidly everywhere, promoting global brand recognition, much of it for such daily consumer products as toiletries, foods, cigarettes and beverages. But integration has been an uneven process – making many products available for a few, but visible to many.” (UNDP, Human Development Report 1998)

The influence of the advertising sector in promoting products for mass-consumption has been widely discussed in various events and publications. The opinions range from optimistic to critical but all agree that advertising has a large impact on creating demands for goods and services.

“... this is an industry whose main outputs include new needs – or at least wants and desires – by the tens of thousands ... Advertising surfs on the leading edge of the commercial waves now racing around the planet. Walk through Moscow these days and you can see the seduction in action: Western-style billboards promote the products of such companies as Coca-Cola, Mars, Nabisco and Procter & Gamble” (Sustainability, 1995).

“... but for each person who succeeds in living more sustainably, dozens more are introduced to the mass consumer society. The advertising industry is a powerful engine that creates new wants and spreads the culture of

materialism.... Gone are the days when the main function of advertising was providing information to consumers. In the competitive markets of the developed world – and, increasingly, in the developing world, too – advertising sells not only goods but a lifestyle and an identity ... Companies are also using people’s concerns for the environment to claim that their products are “cleaner than thou.” ... But the bait dangled by ads can be resisted by aware consumers who can also lobby for measures such as regulations and guidelines on advertising.” (Consumers International, 1997)

The inherent opportunities of the advertising sector to help promote and realize a more sustainable form of consumption have also been outlined.

UNEP, in its cleaner production and sustainable consumption activities, is advocating the use of advertising expertise and techniques to improve the marketing of cleaner products and services. Expertise in designing cleaner products, for instance in small-and-medium sized companies or in developing countries, does not always go hand-in-hand with marketing expertise. Environmentally sound products should not be inferior, they should not be more expensive and they should not be more difficult to find. Business can persuade consumers to buy them just as they have influenced people to buy all kinds of other new products.

“... the major force will not be to reduce consumption. This would probably be a futile exercise. Of far greater importance is to change the nature of consumption towards more environmentally friendly products that can prosper within a strategy of sustainable development. In this, advertising has a major role to play.” (Ogilvy & Mather., in Sustainability, 1995).

Especially in the 1980’s a number of efforts were made – either on a commercial or non-profit basis – to sell the message about the environment to the public. “Green marketing” became a special field of interest for some companies. The successes have even lead to calls for regulating green marketing activities, followed by requests for practical help in implementation (codes of conduct on environmental claims exist in many countries).

Numerous examples also exist in advertising campaigns for “good causes”, designed and carried out by advertising agencies on a voluntary basis. An example is the Dutch “SIRE”-initiative (on the environment, child abuse, violence, health and other topics).

Finally, apart from the role the advertising sector plays as an intermediary between producers/retailers and the consumers, the sector has its own environmental impacts, for example use of energy, paper and ink. A number of measures can be taken to decrease the environmental damage. Measures are similar to those in other industry sectors, including implementing environmental management systems. To both the public and the clients this can set an example. The sector can show that it is taking the environmental aspect into account in its own operations. There have been a number of studies (e.g. carried out by the Norwegian Centre for Sustainable Production and Consumption, GRIP, in collaboration with the Norwegian Association of Advertising Agencies) and activities to improve the environmental performance within the sector. Inspired by the increasing environmental awareness in society, numerous advertising agencies have for instance developed “good housekeeping” measures, to reduce their use of paper, ink, office equipment, energy and waste and to start using more environmental sound alternatives. Some initiatives to decrease car use have been taken and “fair trade” initiatives have lead advertising people, like others, to influence their choice of brand of coffee.

3.2 Opportunities of advertising agencies to work towards sustainable consumption

Opportunities to take action thus range from “good housekeeping” through “use the environmental aspect in a just and transparent way” to “be aware of the sustainable consumption agenda in conducting business”.

The last one is the least developed, in part because the concept and goals of sustainable consumption are not yet well defined.

Just to give some food for thought:

- *should advertising agencies refuse to advertise environmentally harmful products? Some agencies are reported to refuse advertising for arms or tobacco. But how to define environmentally harmful? And what if the product involved strengthens the export position of a developing country, thereby contributing to the human development aspect of sustainability?*
- *should advertising agencies supply “warning messages” (similar as with tobacco) whenever they advertise for*

- environmentally harmful products or services? How influential do we think this would be?*
- *can one justify advertising soft drinks in a country where many have to fight for drinking water?*

The activities of individual advertising agencies very much depend on the priorities of the companies for whom they work. Participants at a WBCSD workshop on sustainability and the market (February 1998) cited “responsible marketing and ethical advertising” as one of the key attributes of sustainable consumption.

“Clearly the most enlightened companies are thinking about incorporating these ideas into their marketing strategies, but will their advertising agencies understand what their clients are talking about?” Francesca van Dijke (Tomorrow Magazine)

This leads to the question whether advertising sustainable products is simply an interesting niche-market for some enlightened agencies as well, or whether it can become common practice for all.

Many initiatives in the advertising sector to work towards sustainable consumption are already underway. Apparently some advertising agencies have seen the benefits for taking action. But others have not been active as of yet, indicating that there are obstacles or that there aren’t enough incentives.

One way of identifying those obstacles and incentives can be through an analysis of case-studies of existing initiatives from advertising agencies all around the world.

Other ways to improve our knowledge include status reports, surveys, workshops, building a network and other communication instruments. And apart from communicating and sharing information among themselves, the advertising sector could reach out to their clients, business and consumers and encourage a greater dialogue.

Furthermore, starting up a dialogue with the “sustainable consumption policy makers” (governments and international governmental organizations such as the United Nations), would be beneficial for all concerned. Policy makers could learn how to better communicate about what they expect, the advertising community (along with the marketing and media world) would get a better feeling for the role they actually could play.

3.3. Identifying questions to address in the meeting

The developments described in the previous sections should act as a basis for lively discussion. To recap the objectives of the meeting: What do we know, what do we need to know, how can we increase our understanding and how can we identify further work?

Participants could consider the questions:

- *What is the role of advertising agencies in working towards sustainable consumption?*
- *What initiatives and actions to help achieve the goals of sustainable consumption are already going on in the sector?*
- *What barriers exist and what incentives are missing, that hinder further actions?*
- *What organizations could influence the barriers and incentives and should be involved in next steps?*
- *What options exist to go forward with an initiative on sustainable consumption in the advertising sector?*

Rather than finding all answers on the contents of the issues addressed so far – which is clearly impossible in a one and a half day’s meeting – we aim to identify which questions are worthwhile and most promising to elaborate on in the future.

We want to consider if we could follow a path similar to that of our successful *banking and insurance initiatives*. However, the advertising sector clearly is a different sector and has its own roles, motivations and skills. Even if the process were similar, the actual commitments, studies and actions will be different. But as with existing initiatives,

the ideas and actions will be developed in close co-operation with all who want to join.

In 1992 UNEP brokered the statement by banks on the environment and sustainable development. This statement included a commitment to increase environmental management, the adoption of best industry practices, environmental impact assessment and the implementation of the precautionary principle. More than 90 commercial banks from 26 countries have so far signed the UNEP statement.

A similar initiative, the statement of the environmental commitment by the insurance industry, has now been signed by about 75 companies from 25 countries.

The statements are prepared and followed up by workshops and position papers on selected topics.

More information about these initiatives can be found at <http://www.unep.ch/eteu/insura>

APPENDIX 3: SOME KEY DOCUMENTS ON SUSTAINABLE CONSUMPTION

Consumers International, Consumers and the Environment: Meeting Needs, Changing Lifestyles, 1997

European Advertising Standards Alliance (EASA), Advertising Self-Regulation in Europe, 1997

Ministry of Environment, Norway, Symposium: Sustainable Consumption, 1994

Ministry of Environment, Norway, Ministerial Roundtable: Conference on Sustainable Production & Consumption, 1995

Ministry of Environment, Norway, Consumption in a Sustainable World, 1998

Ministry of Environment, Republic of Korea, Workshop on Policy Measures for Changing Consumption Patterns, 1995

Ministry of Housing, Spatial Planning and the Environment, The Netherlands, Facilities for a Sustainable Household, 1995

Ministry of Housing, Spatial Planning and the Environment, The Netherlands, National Environmental Policy Plan, 1997

OECD, Clarifying the Concepts, 1995

SustainAbility, Who Needs It? Market Implications of Sustainable Lifestyles, 1995

Tomorrow, Consuming Passions, by Francesca van Dijk, 1998

UNDP, Human Development Report 1998, 1998

UNEP, Industry & Environment Review, Outcomes of High-Level Seminar on Cleaner Production, Warsaw, Poland, 1994

UNEP, Industry & Environment Review, Outcomes of High-Level Seminar on Cleaner Production, Republic of Korea, 1998 (to be published)

UNEP Insurance Initiative: Statement, History and Questions and Answers, <http://www.unep.ch/eteu/insura>

United Nations, Earth Summit +5, Program for the further implementation of Agenda 21, Special Session of the General Assembly, New York, 1997

World Business Council for Sustainable Development (WBCSD), Sustainability in the Market, Executive Brief, November 1998

APPENDIX 4: ABOUT THE UNEP DIVISION OF TECHNOLOGY, INDUSTRY AND ECONOMICS

The mission of the UNEP Division of Technology, Industry and Economics is to help decision-makers in government, local authorities, and industry develop and adopt policies and practices that:

- *Are cleaner and safer;*
- *Make efficient use of natural resources;*
- *Ensure adequate management of chemicals;*
- *Incorporate environmental costs*
- *Reduce pollution and risks for human and the environment.*

For further information, contact:

UNEP, Division of Technology, Industry and Economics

39-43 quai André-Citroën

75739 Paris Cedex 15

France

Tel: 33 1 44 37 14 50

Fax: 33 1 44 37 14 74

Email: unepie@unep.fr

URL: <http://www.unepie.org>