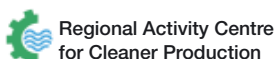




Initiatives for Responsible Consumption



Regional Activity Centre
for Cleaner Production



Generalitat de Catalunya
Government of Catalonia
Department of the Environment
and Housing

Applied Input-Output research on sustainable consumption: available tools, research projects, challenges and opportunities for their use in the Mediterranean Region | [Food Consumption and Civil Society: Some reflexions](#) | [Initiatives for Responsible Consumption: Social Initiatives](#) | [Initiatives for Responsible Consumption: Institutional Initiatives](#) | [Ecopuncture versus greenwash](#) | ["Bio", the italian way to do organic](#) | [Contact details](#)

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Virginia Alzina

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Generalitat de Catalunya
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Presentation

Virginia Alzina

Director

Regional Activity Centre
for Cleaner Production

The eighth issue of the *CP/RAC Annual Technical Publication - Sustainable Consumption and Production in the Mediterranean* devotes its main pages to initiatives promoted both by citizen's organisations and institutions that foster sustainable consumption. Since the approval in 2007 of its mission, which focuses on promoting ways to enhance sustainable consumption and production standards in the Mediterranean, the CP/RAC has strived after working in both fields, production and consumption.

In this line, the Centre collaborates closely with the Marrakech Process, the global initiative on sustainable production and consumption launched by the UNEP and the United Nations Department of Economy and Social Affairs. These relations led to the First Mediterranean Roundtable on Sustainable Consumption and Production, held in November 2008 in Barcelona. Around 150 international representatives of the private and public sector attended this meeting, as well as consumers' associations and NGOs, which contributed actively to raise the debate about the next steps towards more sustainable production and consumption models in the Mediterranean.

The current situation, in which globalization phenomena speed up information and circulation of resources throughout the whole planet, leads humans to increase their impact on the Earth as they become more aware of their activities worldwide effects. Therefore, the civil society in general, gets more information about the cause-effect relationships, which a few years ago, was only accessible to small specialised academic circles, and now is widely spread by organisations, created for this aim. Within this context, consumers have enlarged their scope over the existing interrelationship between consumption, production and environmental deterioration.

As a consequence, more and more public policies are being applied and include both sides of the same coin, consumption and production, which we no longer consider separately. As far as the society is concerned, people get mobilized to change behaviours and obtain tangible results by setting up consumers' organisations, civil associations and NGOs, which get more and more social support and recognition. Since the current economic system growth is based on consumption, it gives the citizens power and responsibility to raise any kind of change. Most of the actions coming from institutional or social areas are bound to this theory, and believe that a group of individual actions gives rise to global consequences.

Following the work guidelines for the next biennium 2008-2009, which were approved in the 15th Conference of the Parties of the Barcelona Convention, the CP/RAC has started working in cooperation with NGOs, consumers' associations, universities and other entities of the civil society. Hence, the Centre gives voice to this type of groups and initiatives in the 8th edition of *CP/RAC Annual Technical Publication- Sustainable Consumption and Production in the Mediterranean*.

This issue starts with a complete lead article on the latest advances of sustainable consumption research. This is one of the newest fields on which the CP/RAC has been working on in recent years. The article also provides keys to identify the challenges and opportunities within the Mediterranean Region. This is followed by a review article on *Food Consumption and Civil Society: Some Reflections*, which analyses the way we eat and the current marketing and food choice trends.

The monograph of the publication, called *Initiatives for Responsible Consumption*, is divided into two sections: *Social Initiatives and Institutional Initiatives*. The first consists of 7 articles and it forms the basis of the publication with contributions of different organisations, groups and associations that raise the citizens' concern. Thus, it covers many groups such as ACRAC, a users and consumers' association, ConSuma Responsabilidad, the Madrid Community Guide for Responsible Consumption, the FACUA association- "*Consumidores en Acción*", "*Hogares Verdes*",

an initiative launched by Barnamil, which intends to reduce resources and energy consumption in private households, and finally the Research and Consumption Information Centre (CRIC), which carries out different activities. The last articles in the *Social Initiatives* section are related to international issues, such as the so-called Day Without Shopping, held in 65 countries, and Global Exchange, an organisation specially involved in Fair Trade projects.

The *Institutional Initiatives* section deals with three different projects: YouthXChange, promoted by the UNEP and ran by the youth and educators, the research project *European Policies for the promotion of sustainable consumption models*, brought out by Ecoinstitut, and finally there is an article on ecobuildings, dealing with initiatives taken for that purpose by the Generalitat de Catalunya. In an ever more globalised world, where the population is exposed to constant communicative inputs that lead to overinformation, the CP/RAC considered it would be appropriate to devote some pages to green communication. This article reflects on the environment as a communicative issue and helps to distinguish those messages with green content that only respond to marketing purposes from those which arise from a real commitment from the company.

As a conclusion the CP/RAC Annual Technical Publication, includes an article that deals with environment-friendly agriculture in Italy, and highlights the consumers' demand for these products and their adaptation to the citizens' routine.

We hope that this new issue will create a lot of interest and contribute to extend the perspective on sustainable consumption as for its increasing importance and the growth of the initiatives around it.

We wish to express our deep gratitude to all the authors who contributed with their articles to provide the magazine with content. Their inestimable collaboration has made this publication possible.

We also would like to take the opportunity to dedicate a special mention to the CP/RAC National Focal Points as an appreciation of their valuable work and contribution to the promotion of Sustainable Consumption and Production throughout the Mediterranean Region.

The CP/RAC team wishes you a pleasant reading ■

Présentation

Virginia Alzina

Directeur

Centre d'Activités Régionales pour la Production Propre

La huitième édition du magazine *Publication Technique Annuelles du CAR/PP - Consommation et production durables dans la Méditerranée* met ses pages principales à la disposition d'initiatives lancées tant par des organisations citoyennes comme par des institutions qui favorisent la consommation durable.

Depuis l'approbation de sa mission en 2007, visant la promotion des mécanismes destinés à renforcer la consommation et la production durables dans les pays méditerranéens, le CAR/PP a fait de grands efforts pour travailler sur les deux aspects, production et consommation durables. Dans cette même ligne, le Centre travaille en étroite collaboration avec le Processus de Marrakech, l'initiative globale sur la production et la consommation durables lancée par le PNUD et le Département d'Affaires Économiques et Sociales des Nations Unies. Cette relation a débouché sur la Première Table Ronde Méditerranéenne sur la Production et la consommation durable, qui a eu lieu à Barcelone en novembre 2008. Environ 150 représentants du secteur public et privé au niveau international ont assisté à cet événement, ainsi que des associations de consommateurs et des ONGs, qui ont contribué activement à la promotion de débats sur les futurs pas vers des modèles de production et consommation plus durables dans la Méditerranée.

La conjoncture actuelle, où les phénomènes de la globalisation accélèrent les flux d'information et de ressources entre tous les points de la planète, fait que l'homme est de plus en plus conscient des effets provoqués par ses activités au niveau mondial en même temps qu'il augmente ses impacts sur la Terre. Ainsi la société civile, en général, reçoit plus d'information sur les relations cause-effet, à laquelle ne pouvaient accéder que des cercles académiques spécialisé très réduits il y a quelques années, et qui aujourd'hui est diffusée par des organisations créées dans ce but. Dans ce contexte, les consommateurs ont élargi leur perception de la correspondance entre la consommation, la production et la dégradation de l'environnement.

En conséquence de tout cela, on applique de plus en plus de politiques publiques qui intègrent les deux faces de la même monnaie, consommation et production, éléments qu'on ne conçoit plus séparément. La société, elle, se mobilise pour changer les comportements et obtenir des résultats tangibles en créant des organisations de consommateurs, associations civiles et ONGs qui profitent de plus en plus de reconnaissance et de soutien social. Vu que le système économique a basé son développement sur la consommation, il laisse donc au consommateur le pouvoir et la responsabilité de promouvoir n'importe quel changement. La plupart des actions qui surgissent tant au niveau institutionnel comme au niveau social se basent sur ce postulat, ayant la certitude que l'ensemble des actions individuelles engendrent des conséquences globales.

En suivant cette directrice de travail pour la période 2008-2009, le CAR/PP a entamé la coopération avec des ONGs, des associations, des universités et d'autres agents de la société civile, qui a été approuvée lors de la 15^{ème} Réunion des Parties Signataires de la Convention de Barcelone. C'est pour cette raison que dans la huitième édition de la *Publication Technique Annuelle du CAR/PP - Consommation et Production Durables dans la*

Presentación

Virginia Alzina

Directora

Centro de Actividad Regional para la Producción Limpia

El octavo número de la revista *CP/RAC Annual Technical Publication - Sustainable Consumption and Production in the Mediterranean* presta sus páginas principales a iniciativas impulsadas tanto por organizaciones ciudadanas como por instituciones que promueven el consumo sostenible.

Desde la aprobación de su misión en el 2007, que contempla la promoción de los mecanismos dirigidos a potenciar pautas de consumo y producción sostenibles en los países del Mediterráneo, el CAR/PL ha realizado importantes esfuerzos para trabajar en ambos aspectos, la producción y el consumo. En esta línea, el Centro colabora estrechamente con el Proceso de Marrakech, la iniciativa global sobre producción y consumo sostenibles impulsada por el PNUMA y el Departamento de Asuntos Económicos y Sociales de Naciones Unidas. Esta relación dio como fruto la Primera Mesa Redonda Mediterránea sobre Producción y Consumo Sostenible, que se celebró en Barcelona en noviembre del 2008. A este evento acudieron cerca de 150 representantes del sector público y privado a nivel internacional, y también asociaciones de consumidores y ONGs, quienes contribuyeron activamente a fomentar el debate sobre los próximos pasos hacia modelos más sostenibles de producción y consumo en el Mediterráneo.

La coyuntura actual, donde los fenómenos de globalización aceleran los flujos de información y recursos entre todos los puntos del planeta, hace que, a la vez que los humanos han incrementado sus impactos sobre la Tierra, también sean más conscientes de los efectos que sus actividades provocan a nivel mundial. Así, la sociedad civil en general recibe mayor información sobre las relaciones de causa-efecto que, hace sólo unos pocos años, no vislumbraban más que reducidos círculos académicos especializados y que ahora organizaciones surgidas a este efecto se encargan de difundir. En este contexto, los consumidores han incrementado su percepción de la interrelación que existe entre consumo, producción y degradación ambiental.

Consecuencia de ello, se llevan a cabo cada vez más políticas públicas que integran ambas caras de la misma moneda, consumo y producción, de las que ya no se concibe que puedan ser tratadas por separado. La sociedad, por su parte, se moviliza para cambiar comportamientos y lograr resultados tangibles creando organizaciones de consumidores, asociaciones civiles y ONGs que ganan cada vez más reconocimiento y apoyo social. El sistema económico actual, al fundamentar su crecimiento en el consumo, da el poder y la responsabilidad al consumidor para fomentar cualquier cambio. Es en este postulado que se basan la mayoría de acciones generadas tanto a nivel institucional como a nivel social, con el convencimiento que el conjunto de los actos individuales generan consecuencias globales.

Siguiendo las líneas de trabajo para el bienio 2008-2009, aprobadas en la 15.^a Reunión de las Partes Contratantes del Convenio de Barcelona, el CAR/PL ha iniciado la cooperación con ONGs, asociaciones de consumidores, universidades y otros actores de la sociedad civil. Por este motivo, en la octava edición de *CP/RAC Annual Technical Publication - Sustainable Consumption and Production in the Mediterranean*, el Centro da voz a este tipo de colectivos e iniciativas.

Este número comienza con un completo artículo de fondo que explica los últimos avances en la investigación sobre consumo sos-

Méditerranée, le Centre donne la parole à ce type de collectifs et initiatives.

Ce numéro commence par un article de fond approfondi qui retrace les derniers progrès des recherches sur la consommation durable, un des sujets les plus nouveaux sur lesquels le Centre travaille depuis les dernières années. De plus, l'article apporte des clés pour identifier les enjeux et les possibilités dans la Région Méditerranéenne. Celui-ci est suivi d'un article d'opinion *Consommation alimentaire et société civile: quelques réflexions*, qui analyse notre manière de manger et raisonne sur les tendances actuelles en marketing et le choix des aliments.

Cette monographie de la publication, ayant pour titre *Initiatives Pour la Consommation Responsable*, est divisée en deux rubriques: *Initiatives sociales* et *Initiatives Institutionnelles*. La première, composée de sept articles, s'établit comme vedette de la publication avec la contribution de différentes organisations, groupes et associations nées des inquiétudes des citoyens. Ainsi on retrouve un parcours de collectifs tels que l'ACRAC, une association de consommateurs et usagers; ConSuma Responsabilidad, le guide de consommation responsable de la Communauté de Madrid; l'association FACUA - "Consumidores en Acción", "Hogares Verdes", une initiative lancée par Barnamil qui vise à réduire la consommation des ressources et d'énergie dans les foyers; et finalement, le Centre de Recherches et d'Information sur la Consommation (CRIC), qui mène plusieurs activités. Les deux derniers articles d'*Initiatives Sociales* traitent de sujets internationaux; la Journée sans Achats, organisé dans 65 pays, en est un exemple, ainsi que Global Exchange, une organisation spécialement engagée dans des projets de commerce juste.

La rubrique *Initiatives Institutionnelles* expose trois projets différents: YouthXChange, lancé par le PNUMA et dirigé par des jeunes et des éducateurs; le projet de recherche *Politiques Européennes pour promouvoir des modèles durables de consommation*, apporté par l'Ecoinstitut; et finalement un article sur les Ecoimmeubles qui retrace les initiatives prises par les Generalitat de Catalunya à ce sujet.

Dans un monde de plus en plus globalisé, où la population reçoit des inputs de communication constants qui peuvent entraîner la surinformation, le CAR/PP a cru convenable dévouer quelques pages à la communication écologiste. Cet article fait une analyse de l'environnement comme un élément de communication et aide à distinguer les messages dans lesquels le contenu écologiste ne vise que le marketing, de ceux qui naissent d'un véritable engagement de l'entreprise.

En guise de conclusion, la *Publication Technique Annuelles du CAR/PP 08* inclue un article qui traite du phénomène de l'agriculture écologique en Italie, et qui met l'accent sur la demande de ses produits des consommateurs et sur son intégration dans les routines des citoyens.

Nous espérons que ce nouveau numéro soit de grand intérêt et qu'il contribue à élargir la vision sur la consommation durable en ce qui fait son importance croissante et les initiatives qui en surgissent.

Nous souhaitons exprimer notre plus sincère reconnaissance à tous les auteurs qui, à travers leurs articles, ont contribué à l'apport de contenus au magazine. Leur inestimable collaboration a fait que cette publication soit possible.

Nous voulons par la même occasion dédier une mention spéciale aux Points Focaux Nationaux du CAR/PP en reconnaissance de leur précieux travail et de leur contribution dans la promotion de la Consommation et la Production Durables dans toute la Région Méditerranéenne.

L'équipe du CAR/PP vous souhaite une agréable lecture ■

tenible, uno de los temas más novedosos en los que el CAR/PL ha estado trabajando en los últimos años. El artículo aporta, además, claves para identificar los retos y oportunidades en la Región Mediterránea. Le sigue el artículo de opinión *Consumo alimentario y sociedad civil: algunas reflexiones*, que analiza cómo comemos y razona las tendencias actuales en marketing y elección de alimentos.

El monográfico de la publicación, bajo el título *Iniciativas para el Consumo Responsable*, se divide en dos apartados: *Iniciativas Sociales* e *Iniciativas Institucionales*. El primero, con siete artículos, se erige como protagonista de la publicación con la contribución de diferentes organizaciones, grupos y asociaciones surgidas de la inquietud de los ciudadanos. Así, se hace un recorrido por colectivos como ACRAC, una asociación de consumidores y usuarios; ConSuma Responsabilidad, la guía de consumo responsable de la Comunidad de Madrid; la asociación FACUA - Consumidores en Acción; Hogares Verdes, una iniciativa impulsada por Barnamil que pretende reducir el consumo de recursos y energía en los hogares particulares; y, finalmente, el Centro de Investigación e Información de Consumo (CRIC), con diversas actividades. Los últimos dos artículos de *Iniciativas Sociales* se sitúan en plano internacional; es el caso del Día sin Compras, celebrado en 65 países, y de Global Exchange, una organización especialmente implicada en proyectos de comercio justo.

El apartado *Iniciativas Institucionales* explica tres proyectos distintos: YouthXChange, impulsado por el PNUMA, y dirigido a jóvenes y educadores; el proyecto de investigación *Políticas Europeas para promover patrones sostenibles de consumo*, aportado por Ecoinstitut; y, para terminar, un artículo sobre los ecoedificios, tratando las iniciativas tomadas por la Generalitat de Catalunya en este sentido.

En un mundo cada vez más globalizado, donde la población recibe constantes inputs comunicativos que llegan a generar sobreinformación, el CAR/PL ha considerado conveniente dedicar unas páginas sobre la comunicación verde. Este artículo reflexiona acerca del medio ambiente como elemento comunicativo y ayuda a distinguir aquellos mensajes cuyo contenido verde responde únicamente a una voluntad de marketing de otros que surgen de un verdadero compromiso de la empresa.

Como colofón al CP/RAC 08 Annual Technical Publication, se incluye un artículo que trata el fenómeno de la agricultura ecológica en Italia, haciendo hincapié en la demanda de estos productos por parte de los consumidores y su inclusión en las rutinas ciudadanas.

Esperamos que este nuevo número sea de su interés y contribuya a ampliar la visión sobre el consumo sostenible respecto su importancia creciente y las iniciativas que crecen a su alrededor.

Queremos expresar nuestro más sincero agradecimiento a todos aquellos autores que, con sus artículos, han contribuido a dotar la revista de contenidos. Su inestimable colaboración ha hecho posible esta publicación.

También aprovechamos la ocasión para dedicar una mención especial a los Puntos Focales Nacionales del CAR/PL en reconocimiento a su valioso trabajo y su contribución en la promoción del Consumo y la Producción Sostenibles en toda la Región Mediterránea.

El equipo del CAR/PL les desea una agradable lectura ■

Applied Input-Output research on sustainable consumption: available tools, research projects, challenges and opportunities for their use in the Mediterranean region

Ignazio Mongelli,
Frederik Neuwahl and
Luis Delgado

European Commission - Joint
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Prospective Technological
Studies

In the past, environmental policy initiatives targeted industries or, in general, the production side of the economy. More recently, reducing pressure on the environment generated by household final consumption has been also the scope of many policy initiatives aiming at the so-called sustainable consumption.

This paper describes some of the most relevant research topics related to sustainable consumption; it gives an overview of the research projects conducted in the field of sustainable consumption and production and discusses the opportunities and challenges related to the implementation of the newest policy analysis tool in the Mediterranean region.

1. Introduction

The growing anthropogenic pressure on the environment is an issue that in recent years has been highly debated in the public arena, and it has also been among the priorities on the world political agenda. During the last US presidential elections the ratification of the Kyoto protocol and the participation of the world's largest emitter of greenhouse gases in the post Kyoto agreements' negotiations were one of the main topics addressed by the two candidates in their speeches.

The way environmental problems are normally addressed is through a set of policy measures that are either designed to internalize the social costs associated to the emission of a pollutant, as in the case of carbon tax or of tradable emission permits, or conceived to impose a maximum admitted limit as for example the concentration of heavy metals in water discharges of tanneries. These two types of measures, respectively examples of the so-called 'market-based instruments' and 'command and control instruments', are the main tools used by policy makers to address the issue of sustainable development, one of the paradigms of the new millennium: promoting an economic growth compatible with the carrying capacity of environment and securing sufficient natural resources for the next generations.

Traditionally, these instruments have targeted those industries which were considered the main causes of environmental pressures. However, new consumer-oriented policies have been pushed forward more recently as a consequence of more and more diversified goods and services available in the market as well as the relevance of consumers' choices in influencing the supply of certain goods or services in the market rather than their substitutes.

The relationship between the purchase and the consumption of goods and services, the satisfaction of needs and consequent environmental pressures is a relatively new subject of study and empirical research. Scholars of disciplines as diverse as psychology, economics, anthropology, biology, chemistry and environmental sciences analysed this phenomenon under different lenses exploring fac-

tors, constraints, social conditions and subjective impulses influencing the consumers' behaviour as well as associated environmental consequences (Cogoy 1999, Crocker and Linden 1998, Deaton et al 1989, Douglas 1996, Georg 1999, Thøgersen and Olander 2003). In the nineties, the issue of sustainable consumption started to be addressed under a multidisciplinary approach integrating all available knowledge, and contributions like those by Uusitalo 1983 and Duchin 1998 drew the attention on the relevance of the analysis of individual lifestyle for the design of more efficient environmental policy initiatives.

This new and complementary consumer-oriented perspective over the environmental problem resulted also in the development of new policy instruments as for instance the 'ecolabel', which informs consumers on the environmental profile of the products available in the market and supposedly steers them toward more 'environmentally conscious' decisions of purchase and Ecodesign, imposing minimum environmental requirements of performance to energy using products.

Together with traditional incentives' mechanisms, Ecodesign, Ecolabel and more in general 'environmental labels' have contributed, although with some limitations due to the low perception of the meaning of the label for some products or services, to a more environmentally conscious purchase behaviour of consumers and consequently to the placement of more 'environmental friendly' products and services in the market.

Along with new types of policy intervention, the focus on the 'consumption side' of the economy has also raised great interest for new research subjects. For instance, also thanks to Ecodesign and Ecolabel, the energy efficiency of household appliances such as air conditioners, washing machines, refrigerators or light bulbs, has actually increased during the last decade and this has undoubtedly led to a more productive use of resources like energy or water for instance, measured in terms of 'unit of input' per 'unit of output' (e.g. joules of energy to heat a cubic meter of living space, or cubic meters of water to wash a kilogram of clothes). However, the important aspect of sustainable consumption addressed in recent papers is the very scale of the amount of goods consumed, which conversely rises with increasing living standard and growing population and -as economic research has put in evidence- might also surprisingly increase with a higher efficiency of household devices. This last win-lose effect is known in the scientific economic literature as rebound effect or 'Jevons paradox', from the name of the first author that addressed this issue in 1865 (Jevons 1865), and it is one of the subjects of the most recent applied research on sustainable consumption. The rebound effect can in fact undermine the efforts aiming at reducing resource consumption in a twofold way. On the one hand, the increased efficiency of appliances may discourage 'cost-saving' behaviour due to the lower price of resource input (higher efficiency means less demand per unit of output and consequently a lower equilibrium price of the resource). On the other, a lower expenditure on resource inputs saves available income for the purchase of additional electrical and electronic equipment that produces an indirect scale effect, which increases total input consumption (Khazzoom 1980, Green 1992, Kratena and Wuger 2005, Greening et al. 2000, Hertwich 2008).

The linkage between final consumption and international trade is another example of a relatively new research subject, the relevance of which has noticeably increased during the last years. The globalization process, lower trade barriers and integration in industrial organization have promoted a process of country specialization and induced a change in trade patterns. An expected consequence might be that advanced economies specialize in less natural resources and intensive eco-

The aspect of sustainable consumption that has been addressed in recent papers is the very scale of the amount of goods consumed

conomic sectors, while developing countries specialize in basic industrial production processes that make a larger use of natural resources and low-skilled labour. Consequently, more advanced countries satisfy their 'dirty' needs, directly or indirectly linked to final consumption, by importing pollution-intensive goods from less developed countries. Growing concerns about the harmful side effects of international trade on environment have been expressed and a large amount of literature has been published on this matter (Grossman and Krueger's 1993, Copeland and Taylor 1994, Antweiler et al. 2001). Applied research on the so-called 'Pollution haven hypothesis' has analysed the magnitude of this phenomenon, the underlying driving forces and the related relevant implications for negotiations on environmental international agreements with controversial findings (Levinson et al. 2006, Harbaugh et al. 2002, Mongelli et al. 2006). International trade patterns between developed and developing economies, respectively with and without carbon control obligations, or carbon constraints, are indeed indicated as one of the main weaknesses of the Kyoto agreements and of the efficiency of the policy measures implemented. Governments of developing and developed nations and industrial sectors both argue about their vulnerability with regard to this phenomenon.

For example, during the recent press conference held in Brussels on the 8th of December 2008, the European Cement Association expressed its concerns about the loss of jobs related to the implementation of the European CO₂ Trading Scheme (EU-ETS) during the years 2008-2013 and the relocation of a large part of cement production in countries outside the Kyoto negotiations (CEMBUREAU 2008). As a response, the European Commission has proposed a procedure of free emission granted allowances in the post-2012 EU-ETS to industries which are more exposed to international competition or to imposition of a "carbon tax" on imports from countries with no carbon constraints. Concerns are also expressed by governments of developing countries as the pollution haven phenomenon constitutes a serious issue for a possible participation to a post-Kyoto negotiation.

The urgency of the Pollution Haven paradigm and the possibly related 'carbon leakage' suggests the adoption of a CO₂ responsibility allocation principle that takes into account an additional perspective over the problem. The principles currently adopted to account for a country's CO₂ responsibility are in fact based on the territoriality of the emissions: only the emissions associated to goods and services' production occurring within the national boundary are been considered regardless of where and by whom those goods are actually consumed.

This CO₂ accounting principle attributes then to the country the responsibility of all emissions associated to the goods and services produced domestically, no matter whether they are consumed domestically or exported. The emissions associated to imported goods are consequently not accounted for. The territorial principle is also referred to in scientific literature as 'production-based approach' to distinguish it from the 'consumption based approach', adopting a completely different perspective to impute the emissions. With the 'consumption based approach' the CO₂ responsibility is in fact attributed to the country by measuring the emissions associated to the goods and services consumed domestically including both the goods produced domestically and those imported. Interesting literature has been published on this subject in the last decade, Wiedmann et al. provides with a comprehensive and updated review of the existing studies (Wiedmann et al. 2007), and several initiatives at the institutional level have been

¹ Carbon leakage is defined as the increase in greenhouse gases emissions outside a country as a direct result of the policy to cap emission in this country.

promoted to broaden the scope of CO₂ accounting in order to include a complementary approach based on a different responsibility principle.

In order to address the research issues related to sustainable final consumption new tools and methods of analysis have been developed or existing tools have been refined and extended. With regard to sustainable consumption research issues, this paper focuses on the usefulness of Input-Output analysis tools and their extensions in this particular field. The paper also presents part of the ongoing research in the field and discusses the emerging challenges and opportunities to analyse these phenomena in the Mediterranean context.

2. Sustainable Consumption and Production analysis through IO modelling

At the institutional level numerous initiatives addressing the issue of sustainable consumption have started to flourish in the last fifteen years. Agenda 21, an action plan adopted at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992, is a pioneer initiative in stressing the importance of sustainable consumption patterns as a complement to sustainable production technologies by asserting that: "the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries, which is a matter of serious concern, aggravating poverty and imbalances". Agenda 21 clearly focused on the unsustainability and unfairness of current consumption patterns and promoted initiatives of research, analysis and policy to address the issue of sustainable consumption patterns and lifestyles. A myriad of working initiatives that aimed at the practical implementation of those ideas and ambitions started at the international as well as the local level. Among the best known, the workshop and roundtable organized by the Norwegian government where the United Nations Environment Programme's (UNEP's) Sustainable Consumption Network (SC.net) was created. During the World Summit for Sustainable Development held in Johannesburg in 2002, changing the current production and consumption activities in industrialized countries was again clearly voiced as a big step towards a less resource intensive, or the least resource intensive, well-being growth path.

In Europe, the European Commission has made a first step toward the implementation of a strategy to achieve sustainable consumption and production. On the 16th of July 2008, the Commission adopted two action plans on Sustainable Consumption and Production (SCP) and on a Sustainable Industrial Policy (SIP) envisaging a revision of the EuP Directive² to broaden its scope initially to energy-related products, and at a later stage to other products, a larger diffusion of the energy labels and of the EU's Ecolabel and prompting the adoption of both standard procurements and incentives to favour the purchase of 'green' products. The Sustainable Consumption and Production (SCP) action plan has been received with skepticism by those who believe it will be difficult in practice to solve the controversial interests between industry and environmental stakeholders, and especially to coordinate policy interventions at country level in the EU27.

The selection of the best strategy and of the correct incentive mechanisms to favour the introduction of a 'green product' on the market, as well as for the exact fixation of standards in the case of Ecolabel and Ecodesign, is greatly helped by the use of quantitative analytical tools; among the tasks of the analyst is to

² The Directive 2005/32/EC known as the EuP Directive gives minimum mandatory environmental requirements to Energy using Products.

The major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production

decide which tool, among the many available today, better suits the specific analytical needs of each situation. The following of this section elaborates on a family of methods stemming from the basic concepts of Input-output analysis (Leontief 1966, Leontief 1970, Miller and Blair 2009). In fact, even with today's proliferation of sophisticated economic modelling techniques, in an arena somehow dominated by large-scale, complex and resource-intensive proprietary models (mostly CGE and Econometric IO models), input-output analysis remains a crucial tool for policy assessment in the field of sustainable production and consumption issues. Several prospective studies of environmental policies can be envisaged using this type of tools; in the following, three broad fields are identified in relation to the scope of analysis and to the different requirements in terms of data and of methodological approach which are: Environmental problem analysis, Prospective (impact) analysis of policies and Monitoring and ex post analysis of policies (Eder et al. 2006).

Environmental problem analysis involves the analysis of the nature and causes of environmental problems, as related to resource use and emissions relevant for policy. The most important application of EEIO models for this purpose include the analysis of:

- a) life-cycle environmental impacts of product groups (e.g. cars, meat, houses, etc.);
- b) life-cycle environmental impacts of consumption expenditure categories, per consumption category (e.g. the impact of food consumption at home and the impact of food consumption in restaurants);
- c) life-cycle environmental impacts per consumer group (e.g. inhabitants of a city versus the rest of a country, car owners versus non-car owners, etc.);
- d) life-cycle environmental impacts of products (in combination with LCA via so-called hybrid LCA-EEIO. In such hybrid LCA-EEIO, the impact of a specific product is analysed with LCA, and the impacts of process chains not included or 'cut off' in the LCA are estimated with the help of EEIO);
- e) life-cycle impacts related to primary resources used (e.g. oil, copper, wood, etc.);
- f) factors are responsible for the main contributions to the above mentioned life-cycle impacts. Examples include the relative importance of impacts in the resource extraction, production, use and waste management stages; the relative importance of domestic impacts and impacts embodied in imports; and the sector mainly contributing to impacts of a consumer group, expenditure category, or product (group).

The second of the broad groups of applications mentioned, Prospective (impact) analysis of policies, involves the ex-ante impact assessment of policy measures and may include trend and scenario analysis; in that sense, carrying out analysis in this domain requires not only from the application of an IO model to the data available but also the definition of policy-technology scenarios of various degree of complexity, often including the detailed specification of individual production technologies based on bottom-up information. The most important application of EEIO models for this purpose include:

- a) economy-wide environmental and other implications of changes in lifestyle and consumption expenditure patterns, such as a shift from travelling to educational and cultural services;
- b) economy-wide environmental and other implications of incremental or radical technical change of products or processes, such as a shift to coal-based

hydrogen production for a large-scale diffusion of fuel cell technologies, combined with carbon sequestration;

- c) economy-wide environmental and other implications of emission reduction measures, such as fine dust reduction in all combustion processes, including shifts to prevention;
- d) economy-wide environmental and other implications of price effects, such as environmental taxation and other ways to internalise external effects (or other price effects in the aforementioned scenarios).

A recent example of EEIO applications for prospective analysis of EU policies is the study "Links between the environment, economy and jobs" published by the European Commission (DG Environment) in 2007. This study used an EEIO model to analyse the links between economy and environment, including the supporting function of a good quality environment for many sectors in the economy.

The study includes prospective analyses of the impact of environmental policies on jobs and employment. Another example is in the preparation of the "Biofuels Progress Report" COM (2006)845 and "Renewable Energy Road Map" COM (2006) 848, where an IO-based model, extended with econometric specification of household consumption and aligned with sectoral agro-energy simulations, was developed to assess EU25-wide impacts on Employment and GDP of different scenarios. The underlying study has been published by Neuwahl et al. (2008).

The third group of applications is 'Monitoring and ex post analysis of policies', and involves the ex-post analysis of impacts and effectiveness of policy measures, generally speaking by analysing data sets including time series embracing the relevant time span; this also indicates that the availability of time series of economic accounts and environmental data comparable over the entire time span is essential. Prominent examples of application of EEIO models for this purpose are:

- a) analysis of the relation between environmental impact, be it emissions, total material requirement, or a specific impact, and economic output, via a variety of cross sections of the economy (for instance for a specific industry sector, a specific product group, a specific consumption expenditure category);
- b) regarding to the former point: monitoring of eco-efficiency ratios (impact per unit of value added generated);
- c) decomposition analysis of observed changes in the aforementioned ratios (for instance, whether decoupling between CO₂ emissions and economic growth is caused by a change in consumption patterns, a change in technology structure, in production structure, or a change in emission factors).

Although the conceptual framework of this field of application is relatively straightforward, operational examples for the entire EU or for the Mediterranean area are scarce. This is due essentially to limitations in data availability, as comparable time series of IO tables at constant prices with sufficient geographic, time and environmental extensions coverage have not been available until now. On a national scale, one of several exemplary studies is that of the Federal Statistical Office of Germany for carbon dioxide emission changes between 1993 and 2000.

2.1. Recent and on-going research projects in the field of IO modelling for SUSPROC

Among the recent IO-based studies in the domain of sustainable consumption and production that used an aggregate IO table for the whole EU, a prominent example is the EIPRO (Environmental Impact of PROducts, IPTS/ESTO 2006), where the

screening of priority consumption and production areas that show the most environmental improvement potential was conducted with a highly detailed (more than 400 product groups and hundreds of environmental extensions) IO table with environmental satellites for the aggregate EU25.

Several follow-ups of the EIPRO study have been conducted or are currently underway to analyse in detail the improvement potential of different policy options to reduce the environmental impacts related to the consumption categories identified as bearing the most environmental impacts: automobiles, housing including domestic use of energy, and food (chiefly meat) products. These follow-up studies are grounded on extensive bottom-up research of the engineering information of the technical options, and are complemented by a socio-economic assessment of the options based IO analysis. Two studies related to meat production and to diet changes (Weidema et al 2008 and Tukker et al 2009) have already been completed, and a further study on the environmental improvement potential of private cars, (Nemry et al 2009) is forthcoming.

The interest of the policy community towards IO methods for sustainable consumption and production analysis is confirmed also by the success of IO-based projects in obtaining funding in large scale projects under the European Commission's Framework Programme for Research and Development (FP6, FP7).

One of the most prominent examples is EXIOPOL (A New Environmental Accounting Framework Using Externality Data and Input-Output Tools for Policy Analysis), a large scale (5M Euro EC contribution) Integrated Project (IP) under the EU's 6th Framework Programme for Research and Development. The project started in March 2007 and is expected to run until March 2011. EXIOPOL aims to support cost-effectiveness and cost-benefit analysis of technologies, policies, and standard setting, at the micro, macro and meso level, in relation to various EU sustainability policies. The EXIOPOL IP has 3 principal objectives:

1. **To synthesize and develop comprehensive estimates of the external costs for Europe** of a broad set of economic activities;
2. **To set up a detailed environmentally extended (EE) Input-Output (I-O) framework**, linked to other socio-economic models, in which as many of these estimates as possible are included. Such an EE I-O database for the EU 27 does not exist to date. This data compilation activity will allow the estimation of environmental impacts and external costs of different economic sector activities, final consumption activities and resource consumption for countries within the EU;
3. **To apply the results** of the external cost estimates and EE I-O analysis **for the analysis of policy questions** of importance, as well as to evaluate the impact of past research about external costs on policy-making in the EU. The architecture of the Exiopool EE-IO database will have the following features: 27 EU countries and ~15 main trade partners; consistent with the national accounts published by Eurostat but with additional details in the agricultural, energy, fuel, transport, energy intensive and waste disposal activities, up to 130 sectors; interlinked via full bilateral trade matrices; including socio-economic and environmental satellites for a broad range of pollutants, resource uses and external cost estimations, including the environmental impacts related to final consumption and waste disposal activities; for the single base year 2000 but easily updatable, with a foreseen demonstrative extrapolation to the year 2005. It is foreseen that the European Commission, through JRC IPTS, will maintain, update and apply for analysis the EXIOPOL EE-IO database after completion of the project.

A further extension of the EXIOPOL work is under discussion with the proposed project WIOD (World Input-Output Database, Compilation and Applications), currently at proposal stage under the 7th Framework programme, that may start already in 2009. This project would have a twofold aim. The first goal is to construct a global database of national input-output tables, which are linked through international trade flows, creating so-called inter-country tables. An inter-country table contains information on, for example, the use of paints by the German automobile industry which are produced by the Indian chemical industry. These tables are linked to a wide range of environmental and socio-economic indicators.

Compared to EXIOPOL, WIOD would have far less sectoral detail (ca.30 sectors), but on the other hand produce the time series (mid-nineties on) that are indispensable for instance for the retrospective analysis applications described under point (3) of the former section. The second objective is to employ the database for integral and consistent analyses of the effects of increasing international trade and economic growth on socio-economic and environmental development, to enhance our understanding of their interrelations and to guide policy making.

In addition to those promoted by the European Commission, prominent examples of research initiatives in the field of Sustainable Consumption and Production are also those based on the use of the Global Trade Analysis Project (GTAP) (Berrittella et al. 2007, Neuwahl et al. 2008, Peters et al. 2008). GTAP started as a research project at Purdue University (USA) in early nineties with the aim of establishing a common data framework for the quantitative analysis of global trade policy issues (Hertel T. W., 1997). Since the release of the first version of the database in 1993, GTAP has gone through a process of continuous amelioration including extensions with environmental satellite accounts. The seventh and newest version of GTAP features IO tables for 113 regions covering 57 economic sectors, with high detail in agriculture. Moreover, the further extension of monetary IO tables with data about sectoral energy use, greenhouse gases emissions and land-use makes GTAP a data reference for the implementation of models focusing on climate change related policy issues, such as those discussed at the International Panel on Climate Change (IPCC) meetings.

2.2. Applied research tools focusing on sustainable consumption

Households absorb in Europe (EU27) more than 30% of the total gross output indicating the cause-effect link between production and consumption as well as implicitly between household consumption activities and natural resource use or air pollution. Consequently, analysing the determinants of consumers' habits and lifestyle becomes of great relevance for a better shaping of policies for sustainability. A substantial number of papers have been published on this subject (Ferrer-i-Carbonell et al 2004, Brännlund et al. 2007, Kletzan et al. 2002). In this domain, IO analysis tools are often extended with a more detailed specification of the consumers behaviour, which can be represented statically with a dataset of household budget statistics such as published by Eurostat (2007), providing the data of the European households' expenditure for different consumption purposes. This is the case for example of the EIPRO project where the European consumers' lifestyle was represented by using household statistics measuring the budget allocation among different consumption purposes classified by COICOP³.

³ The acronym COICOP stands for Classification Of Individual Consumption by Purpose, and is the name used for this official classification scheme adopted internationally and proposed at the beginning of the nineties by the UN statistical office.

Or with a more comprehensive household demand system that includes econometrically estimated price income elasticities as well as other parameters reflecting the influence on consumption of other socio-demographic characteristics of the households. In this latter case the extension of the basic IO model is more accurate and endowed with a greater analytical potential. An example using this approach is a work by Labandeira and Labeaga done in 1999 which analyses the distributional effects of carbon taxation in Spain with an IO model coupled to an econometrically estimated household demand system. A relevant piece of literature in this specific field is a recent work by Yoo and Hewings (2006), who quantify the importance of relaxing the assumption of a 'representative consumer' in a macroeconomic forecasting model with an Input-Output core, by introducing a demand system that distinguishes between households with different composition, income and age.

More in detail, a household demand system describes how the households allocate their consumption expenditure among different consumption categories as a function of the total expenditure, the relative price of all the specified consumption categories and a number of other socio-demographic characteristics of the household such as size, composition, location, age of the reference person or number of cars owned. The demand system is structured as a budget allocation decision over subsequent steps, which means that the representative consumer first allocates the total expenditure between durables and non durables, then in the second stage allocates the expenditure on non durables to the categories food, energy, transport, services, etc. A schematic representation of a demand system is provided below in Eq. 1.

$$w_i^j = f(p_i, x^j, z^j) \quad (1)$$

Where w stands for the consumption share of a specific consumption category, p for the price of the category itself as well as the other, x for total income or total expenditure and z represents the set of socio-demographic characteristics introduced for a better representation and differentiation of household consumption. The indices i and j stand respectively for consumption category and family type.

The coupling of an IO model to a household consumption block requires consistency of the two in terms of classification and of the valuation system used. In fact, the household expenditure statistics, as well as the household demand system are generally valued at purchasers' prices and classified according to COICOP, while the IO modelling framework is customarily valued at basic prices and follows a product-by-product or industry-by-industry (respectively CPA and NACE in the European System of Accounts) classification scheme. Therefore, both for the 'quantity' and the 'price' models, the consumption data present a mismatch in terms of the adopted valuation system (purchasers' prices vs. basic prices) and of the scheme for the commodity classification (COICOP vs. CPA). Mongelli et al. describe how to correctly link an IO model to a household consumption block (Mongelli et al. 2008).

3. Challenges and opportunities in the Mediterranean region

In November 1995 an agreement called Euro-Med Partnership aiming at trade liberalisation in the Mediterranean region was established by the 'Barcelona declaration' between the EU15 countries and Algeria, Cyprus, Egypt, Israel, Jordan,

Lebanon, Malta, the Palestinian Authority, Syria, Tunisia, and Turkey. The central scope of the Euro-Med Partnership is the creation of a Mediterranean Free Trade Zone (MFTZ), which is expected to be implemented by 2010 and will establish a free duty and tariff trade exchange regime for commodities and services.

The Euro-Med Partnership is already contributing to strengthen the trade relationship between the Mediterranean countries and has fostered the trade exchanges in the region. 9.7 percent of total EU exports in 2007, mainly machinery, transport equipments and chemicals, were directed toward the Mediterranean (MED) countries belonging to the agreement while 7.5 percent of the total EU imports were from the MED countries, mainly agricultural products and textiles.

The average annual growth rate of European exports toward the MED countries is 8 percent. Among the Mediterranean trade partners, Turkey is the country with the largest import and export flows with the EU. According to recent trade statistics, the EU is by far the first importing region from Turkey, which represents also a relevant market for European exports ranking number five of the countries where European exports are directed (EU-Mediterranean Trade. Memo - Marseille, 2 July 2008). Trade flows between the EU and the MED countries is growing also in services, being tourism a sector of particular interest.

Whilst the strengthening of trade relationship between the EU and the MED countries represents an opportunity to promote economic development as well as social and territorial cohesion, it could also produce strong adverse economic, social and environmental consequences if the scope of the trade liberalisation process in the Mediterranean were not broadened, so as to include policy measures other than the mere abatement of tariffs and duties. These are the overall conclusions drawn by the sole, to our knowledge, impact assessment study conducted so far on the trade liberalisation process in the Mediterranean region. This impact assessment study has been commissioned by the European Commission in order to analyse the potential social, economic and environmental effects of the trade liberalisation process in the Mediterranean region, and it has been conducted by a consortium led by the University of Manchester (European Commission, 2007).

A closer trade relationship among countries featuring such strong differences is likely to produce structural changes in the economic systems involved both for the technologies adopted for production and in household lifestyles. In this respect, the availability of the datasets and modelling frameworks originating from research projects such as Exiopol and WIOD, described in a previous section of this paper, gives the opportunity of analysing the possible technology and household consumption scenarios and of guiding the selection of the most suitable policy measures to encourage a sustainable economic development in the Mediterranean region. The use of the discussed data frameworks as a tool to facilitate the negotiation of environmental agreements deserves particular attention. Global environmental issues, as for instance climate change, are addressed by negotiating the commitment of each country on the basis of pollutants emission responsibility.

With regard to climate change, the introductory section of this paper discusses the two principles that can be adopted to account for greenhouse gas responsibility, namely the "production approach" and the "consumption approach", along with their respective features. In this respect, Input-Output tables with environmental extensions such as greenhouse gas accounts are perhaps the tool par excellence to correctly and consistently quantify the reduction commitment of each country.

The strengthening of trade relationship between the EU and the MED countries represents an economic opportunity, but it could also produce strong adverse environmental consequences

As the process of trade liberalisation in the Mediterranean goes on, hopefully along with the implementation of measures aiming at the mitigation of the associated adverse social and environmental effects, prospective analyses are strategically necessary to fully reap the genuine benefits of economic development and the availability of multiregional datasets as GTAP, Exiopol or WIOD can provide with the data framework necessary for these types of analysis. The main challenge is the lack of harmonized statistical data for most of the MED countries. GTAP includes IO tables only for Turkey, Egypt, Morocco and Tunisia, while the rest of the MED countries are aggregated within a 'Rest of North Africa' or 'Rest of Western Asia' tables. Exiopol and WIOD foresee the inclusion of detailed Input-Output tables and environmental extensions only for Turkey while including the remaining Mediterranean countries in a generic Rest of the World Input-Output table. However, statistical sources that can be integrated in these datasets exist as well as official cooperation program between Eurostat and the National Statistical Offices of the Mediterranean countries (Eurostat-MEDSTAT) and we believe that the effort of harmonizing and including these data to complement this gap is worthwhile and should be strongly pursued.

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Recherche d'entrée-sortie appliquée à la consommation durable : outils disponibles, projets de recherche défis et leurs possibilités d'application dans la région méditerranéenne

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Dans le passé, les initiatives politiques de l'environnement visaient les industries et en général l'aspect de la production de l'économie. Plus récemment, la réduction de la pression sur l'environnement exercée par les ménages, a aussi été intégrée dans le champ d'action des initiatives qui ont pour but ce qu'on appelle la consommation durable.

Ce document retrace quelques uns des sujets de recherche pertinents relatifs à la consommation durable, offrant une vue d'ensemble des projets de recherche menés dans le champ de la consommation et la production durables, et traite les possibilités et les défis liés à l'implémentation de l'outil plus récent d'analyse des politiques dans la région méditerranéenne.

1. Introduction

La croissante pression anthropique sur l'environnement est un problème qui a été très débattu dans le domaine public, mais il a aussi été parmi les priorités du programme politique mondial. Pendant les dernières élections présidentielles des États Unis, la ratification du Protocole de Kyoto et la participation aux négociations d'accords postérieures à Kyoto du plus grand producteur de gaz à effet de serre, a été un des sujets principaux abordés par les deux candidats dans leurs discours.

Les problèmes environnementaux sont généralement traités à travers un ensemble de mesures politiques qui sont, soit conçues pour internaliser les coûts sociaux liés aux émissions d'un polluant, comme dans le cas de l'impôt sur le carbone ou des permis d'émissions négociables, soit conçues pour imposer une limite maximale admise comme, par exemple, la concentration de métaux lourds dans les émissions d'eau des tanneries. Ces deux types de mesures, étant respectivement des exemples de ce qu'on appelle les « outils basés sur le marché » et les « outils de commandement et contrôle », sont les outils principaux qu'utilisent les autorités politiques pour aborder le problème du développement durable, un des paradigmes du nouveau millénaire: promouvoir un développement économique compatible avec la limite de charge de l'environnement et garantir la suffisance de ressources naturelles pour les prochaines générations.

D'habitude, ces outils visaient les industries, qui étaient considérées les causes principales des pressions environnementales. Par contre, plus récemment, de nouvelles politiques orientées sur les consommateurs ont été mises de l'avant, comme conséquence des produits et des services, de plus en plus diversifiés, disponibles sur le marché et de la pertinence du choix des consommateurs qui influe sur l'offre du marché de certains produits et services plutôt que de leurs substituts.

La relation entre l'achat et la consommation de biens et services, la satisfaction des besoins, et les pressions environnementales qui en dérivent, est un sujet d'étude et de recherche empirique

Investigación de Entrada-Salida aplicada al consumo sostenible: herramientas disponibles, proyectos de investigación, desafíos y oportunidades para su uso en la región mediterránea

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En el pasado, las iniciativas de política medioambiental iban dirigidas a industrias o, de forma más general, al lado productivo de la economía. Más recientemente, la reducción de la presión sobre el medio ambiente generada por el consumo doméstico final se ha convertido asimismo en el campo de muchas iniciativas políticas dirigidas al llamado consumo sostenible.

Este documento describe algunos de los temas más relevantes relacionados con el consumo sostenible; proporciona una visión general sobre los proyectos de investigación llevados a cabo en el ámbito de la producción y el consumo sostenibles, y trata sobre las oportunidades y los desafíos relacionados con la implementación de la herramienta de análisis de políticas más reciente en la región mediterránea.

1. Introducción

La creciente presión antropogénica sobre el medio ambiente constituye una temática que ha sido objeto de debate público en los últimos años, además de convertirse en una de las prioridades de la agenda política. Durante las últimas elecciones norteamericanas, la ratificación del protocolo de Kyoto y la participación del mayor emisor de gases de efecto invernadero en las negociaciones de acuerdos posteriores a Kyoto fueron uno de los asuntos principales a los que hicieron referencia ambos candidatos en sus discursos.

La forma mediante la cual se tratan los problemas medioambientales es a través de un conjunto de medidas políticas que están diseñadas bien para internalizar los costes sociales asociados a la emisión de un agente contaminante, como es el caso de la tasa de carbono o de los permisos de emisión negociables, o bien para marcar un límite máximo de admisión, como por ejemplo en el caso de la concentración de metales pesados en los vertidos de agua de tenerías. Ambos tipos de medidas, ejemplos la primera de los llamados « instrumentos basados en el mercado » y la segunda de los « instrumentos de mando y control », son las herramientas principales utilizadas por los creadores de políticas para abordar la temática del desarrollo sostenible, uno de los paradigmas del nuevo milenio: impulsar un crecimiento económico compatible con la capacidad de carga del medio ambiente y el aseguramiento de recursos naturales suficientes para las siguientes generaciones.

Tradicionalmente, estos instrumentos han tenido como objetivo esas industrias, a las que se las consideraba como la causa principal de las presiones medioambientales. Sin embargo, y más recientemente, han sido impulsadas nuevas políticas orientadas a los consumidores como consecuencia de la creciente diversificación de bienes y servicios disponibles en el Mercado y de la relevancia de las opciones de los consumidores en la misma oferta del mercado por determinados bienes y servicios en detrimento de sus correspondientes sustitutos.

La relación entre la compra y el consumo de bienes y servicios, la satisfacción de las necesidades y las consecuentes presiones

relativement nouveau. Des spécialistes en matières aussi diverses comme la psychologie, l'économie, l'anthropologie, la biologie, la chimie et les impulsions subjectives qui influencent le comportement des consommateurs ainsi que les conséquences environnementales (Cogoy 1999, Crocker et Linden 1998, Deaton et al. 1989, Douglas 1996, Georg 1999, Thøgersen et Olander 2003). Dans les années 90, le problème de la consommation durable avait commencé à être abordé à travers une approche multidisciplinaire qui intégrait toutes les connaissances disponibles, et des contributions telles que celles de Uusitalo 1983 et Duchin 1998 qui centrèrent l'attention sur la pertinence de l'analyse du style de vie individuel pour concevoir des initiatives de politiques environnementales efficaces.

Cette nouvelle vision complémentaire, basée sur le consommateur, sur le problème environnemental a aussi eu comme résultat le développement de nouveaux instruments politiques comme « l'Écolabel », qui informe les consommateurs sur le profil environnemental des produits disponibles sur le marché et les oriente, en principe, vers des décisions d'achat « plus conscientes au niveau écologique », et l'Écoconception qui impose un minimum d'exigences écologiques dans l'efficacité de produits consommateurs d'énergie. Avec les mécanismes d'encouragement traditionnels, l'Écoconception et l'Écolabel, et en général les « labels écologiques » ont contribué, malgré quelques limitations dues à la mauvaise perception de ce que signifie le label de quelques produits et services, à un comportement d'achat des consommateurs plus conscient au niveau écologique et par conséquent au placement de produits plus « écologiques » sur le marché.

Avec les nouveaux types d'intervention politique, l'attention sur le « côté consommation » de l'économie a aussi fait surgir un grand intérêt pour de nouveaux sujets de recherche. Par exemple, grâce aussi à l'écoconception et à l'Écolabel, l'efficacité énergétique des appareils électroménagers tels que la climatisation, les machines à laver, les réfrigérateurs et les ampoules, a d'ailleurs augmenté pendant les dix dernières années et ceci a sans doute entraîné une utilisation plus productive des ressources énergétiques comme par exemple l'énergie et l'eau, qui se mesure en « unité d'entrée » par « unité de sortie » (ex : joules d'énergie pour réchauffer un mètre cube d'espace habitable, ou un mètre cube d'eau pour laver un kilogramme de vêtements). Cependant, l'aspect important de la consommation durable qui a été abordée dans des documents récents n'est que la dimension du nombre de biens consommés, qui surgit réciproquement avec le développement du niveau de vie et la croissance de la population et - comme le témoigne la recherche économique - pourrait, curieusement, augmenter avec une la croissance de l'efficacité des appareils ménagers. Ce dernier effet de *perdre-gagner* est connu dans la littérature économique scientifique comme un effet rebond sous le nom de « *paradoxe de Jevons* », du nom du premier auteur qui a traité cette question en 1865 (Jevons 1865), et c'est un des sujets des plus récentes recherches appliquées dans la consommation durable. En fait, l'effet rebond peut doublement ébranler les efforts pour réduire la consommation de ressources. D'une part, la haute efficacité des électroménagers peut décourager l'attitude de « l'économie du coût » dû au bas prix de l'emploi de ressources (une plus grande efficacité entraîne moins de demande par unité de production et en conséquence un prix d'équilibre de ressource plus bas). D'autre part, les dépenses plus réduites dans l'emploi de ressources permet d'économiser sur les revenus pour l'achat d'autres appareils électriques et électroniques qui produisent un effet d'échelle indirect, ce qui accroît la consommation totale de revenu (Khazzoom 1980, Green 1992, Kratena et Wuger 2005, Greening et al. 2000, Hertwich 2008).

Le lien entre la consommation finale et le commerce international est un autre exemple de sujet de recherche relativement nouveau, la pertinence duquel a augmenté considérablement durant les dernières années. Le processus de globalisation, les

medioambientales es un tema de estudio y de investigación empírica relativamente nuevo. Estudiantes y expertos de disciplinas tan variadas como la psicología, la economía, la antropología, la biología, la química y las ciencias medioambientales analizaron este fenómeno bajo diferentes puntos de vista explorando factores, restricciones, condiciones sociales e impulsos subjetivos que influencian el comportamiento de los consumidores, así como las consecuencias medioambientales (Cogoy 1999, Crocker y Linden 1998, Deaton et al 1989, Douglas 1996, Georg 1999, Thøgersen y Olander 2003). En los años noventa, la cuestión del consumo sostenible comenzó a ser abordado de forma multidisciplinaria, integrando todo el conocimiento disponible, así como con contribuciones como las de Uusitalo en 1983 y Duchin en 1998, que llamaron la atención sobre la relevancia del análisis de la forma de los individuos en el diseño de iniciativas más eficientes de política medioambiental.

Esta nueva y complementaria perspectiva orientada a concienciar al consumidor sobre los problemas medioambientales llevó asimismo al desarrollo de nuevos instrumentos de política como por ejemplo las «ecoetiquetas», que informan a los consumidores sobre el perfil medioambiental de los productos disponibles en el mercado y, supuestamente, los tratan de orientar a tomar decisiones de compra y de Ecodiseño más «conscientes mediambientalmente», imponiendo requerimientos mínimos de medio ambiente sobre el desempeño en lo referente a productos que consumen energía. Junto a los mecanismos de incentivos tradicionales, el Ecodiseño, las Ecoetiquetas y, de forma más amplia, las «etiquetas medioambientales» han contribuido, aunque con algunas limitaciones debidas a la baja percepción de la importancia de la etiqueta en algunos productos o servicios, a un comportamiento de los consumidores más conscientes mediambientalmente en lo relativo a compras y, consecuentemente, a la colocación de un mayor número de productos y servicios «amistosos con el medio ambiente» en el mercado.

Junto a nuevos tipos de intervenciones políticas, la concentración en el «lado del consumo» de la economía ha crecido también debido al gran interés existente en lo referente a nuevos temas de investigación. Por ejemplo, y también gracias al ecodiseño y las ecoetiquetas, la eficiencia energética en aplicaciones residenciales tales como aires acondicionados, lavadoras, frigoríficos o bombillas, se ha visto incrementada durante la última década y esto ha llevado, indudablemente, a un uso más productivo de recursos tales como la energía o el agua, medidos en términos de «unidades de entrada» o por «unidades de salida» (Por ejemplo: Jules de energía para calentar un metro cúbico de espacio vital, o metros cúbicos de agua para lavar un kilogramo de ropa). Aún así, el aspecto importante del consumo sostenible que ha sido abordado en recientes documentos es la gran escala de la cantidad de bienes consumidos, que en cambio crece con el crecimiento de los estándares de vida y de la población. Además, y tal y como ha demostrado la investigación económica, sorprendentemente puede incluso llegar a crecer con una mayor eficiencia de los dispositivos del hogar. Este efecto *ganar-perder* se conoce en la literatura científica económica como efecto rebote o «*La paradoja de Jevons*», que fue el primer autor que estudió el asunto en 1865 (Jevons, 1865), y es uno de los temas de más reciente aplicación en la investigación y el consumo sostenible. El efecto rebote puede, de hecho, minar los esfuerzos dirigidos a la reducción del consumo de recursos en un doble aspecto. Por una parte, incrementando la eficiencia de las aplicaciones, puede llegar a desalentar comportamientos de «ahorro de costes» debido al menor precio de los recursos entrantes (mayor eficiencia quiere decir menor demanda por unidad de output y, consecuentemente, un menor precio de equilibrio del recurso en cuestión). Por otro lado, un menor gasto en los recursos entrantes ahorra ingresos disponibles para la compra de equipamiento eléctrico y electrónico adicional que produce un efecto de escala indirecto, que a su vez incrementa el con-

barrières commerciales moins importantes et l'intégration dans une organisation industrielle ont renforcé un processus de spécialisation par pays et entraîné un changement dans les modèles de commercialisation. Une des conséquences prévisibles pourrait être que les économies avancées se spécialisent dans les secteurs de ressources moins naturelle et dans l'économie à forte intensité, alors que les pays en voie de développement se spécialisent dans la production industrielle basique qui entraîne une utilisation plus importante de ressources naturelles et un travail peu qualifié. En conséquence, les pays plus développés satisfont leurs besoins « sales », directement ou indirectement liés à la consommation finale, en important des biens provenant d'une pollution intense de pays moins développés. Des préoccupations croissantes concernant les effets secondaires du commerce international sur l'environnement ont été exprimées et un grand nombre d'écrits ont été publiés à ce sujet (Grossman et Krueger's 1993, Copeland et Taylor 1994, Antweiler et al. 2001). La recherche appliquée à ce qu'on appelle « l'Hypothèse de la Pollution Refuge » a analysé l'envergure de ce phénomène, les forces motrices sous-jacentes et les implications pertinentes qui sont liées aux négociations d'accords internationaux sur l'environnement, avec des conclusions controversées (Levinson et al. 2006, Harbaugh et al. 2002, Mongelli et al. 2006). Les modèles de commerce international entre les économies développées et celles en voie de développement, respectivement avec et sans obligations de contrôle de carbone, ou avec des contraintes de carbone, sont en effet, considérés comme une des faiblesses principales des accords de Kyoto et de l'efficacité des mesures politiques implémentées. Les gouvernements des pays développés et ceux en voie de développement et les secteurs industriels débattent de leur vulnérabilité face à ce phénomène. En tant qu'exemple, lors de la récente conférence de presse qui a eu lieu à Bruxelles le 8 décembre 2008, l'Association Européenne du Ciment a exprimé sa préoccupation concernant la perte d'emplois liée à l'implémentation du Système Européen d'Échange de Quotas de CO₂ (UE-ETS) pendant les années 2008-2013 et la délocalisation d'une grande partie de production de ciment dans des pays qui ne se trouvent pas dans les négociations de Kyoto (CEMBUREAU 2008). La réaction de la Commission Européenne a été de proposer une procédure de permis de libre émissions accordés dans l'UE-ETS d'après 2012, aux industries qui sont plus exposées à la concurrence internationale ou à l'imposition d'une « taxe sur le carbone » sur les importations provenant de pays sans contraintes carbone. Les gouvernements expriment aussi leurs préoccupations concernant les pays en voie de développement, étant donné que le phénomène de pollution refuge représente un grave problème pour une éventuelle participation à la négociation de l'après-Kyoto.

L'urgence du paradigme de la Pollution Refuge et la possible corrélation de la « fuite de carbone¹ » implique l'adoption d'un principe d'allocation de responsabilité concernant les émissions de CO₂ qui tient compte d'une vision complémentaire sur le problème. Les principes qui sont actuellement adoptés pour justifier la responsabilité d'un pays concernant le CO₂ sont en fait basés sur la territorialité des émissions : seul les émissions associées à la production de biens et services dans les limites d'un pays sont tenues en compte, indépendamment du lieu et des consommateurs de ces produits. Ce principe de justification de CO₂ accorde donc au pays la responsabilité de toutes les émissions associées aux biens et services produits au niveau national, peu importe si ils sont consommés dans le pays ou si ils sont exportés. Les émissions liées aux biens importés ne sont donc pas prises en compte. Le principe territorial est aussi mentionné dans les écrits scientifiques

¹ Le perte de Carbone est définie comme l'augmentation des émissions de gaz à effet de serre à l'extérieur d'un pays comme résultat direct de la politique pour limiter les émissions dans ce pays.

sumo total de input (Khazzoom 1980, Green 1992, Kratena y Wuger 2005, Greening et al. 2000, Hertwich 2008).

La unión entre consumo final y comercio internacional es otro ejemplo de un tema de investigación relativamente novedoso, cuya relevancia ha crecido notablemente en los últimos años. El proceso de la globalización, las menores barreras al comercio y la integración en la organización industrial han impulsado un proceso de especialización del país y han inducido a un cambio en los patrones de comercio. Una consecuencia esperada de esto sería que las economías avanzadas se especializan en recursos menos naturales y en sectores económicos intensivos, mientras que los países desarrollados se especializan en procesos de producción industrial básica que provocan un mayor uso de recursos naturales y de mano de obra no cualificada. En consecuencia, los países más avanzados satisfacen sus necesidades « sucias », directa o indirectamente ligadas al consumo final, mediante la importación de bienes altamente contaminantes de países menos desarrollados. Las preocupaciones crecientes sobre los dañinos efectos secundarios del comercio internacional sobre el medio ambiente han sido puestas de relieve, y se ha publicado mucha literatura al respecto de este tema (Grossman y Krueger, 1993, Copeland y Taylor 1994, Antweiler et al. 2001). La investigación en la llamada « Hipótesis del Refugio de la Contaminación » ha analizado la envergadura de este fenómeno, las fuerzas motores subyacentes y las implicaciones relacionadas pertinentes para las negociaciones de acuerdos internacionales con algunos resultados controvertidos (Levinson et al. 2006, Harbaugh et al. 2002, Mongelli et al. 2006). Los modelos internacionales de comercio entre las economías desarrolladas y aquellas en vía de desarrollo, con y sin obligaciones sobre el carbono respectivamente, o bien con restricciones sobre el carbono, son efectivamente lo que se considera uno de los principales puntos débiles de los acuerdos de Kyoto y de la eficiencia de las medidas políticas llevadas a cabo.

Tanto los gobiernos de los países desarrollados y aquellos en vía de desarrollo como los sectores industriales debaten sobre su vulnerabilidad frente a este fenómeno. Como ejemplo, durante la reciente conferencia de prensa que se celebró el 8 de diciembre 2008 en Bruselas, la Asociación Europea del Cemento expresó su preocupación acerca de las pérdidas de empleos relacionadas con la implementación del Régimen de Comercio de Derechos de Emisión de la Unión Europea (EU-ETS) durante los años 2008-2013 y la deslocalización de una gran parte la producción de cemento hacia países externos a las negociaciones de Kyoto (CEMBUREAU 2008). La respuesta de la Comisión Europea ha sido la propuesta de un sistema de adjudicación de permisos de libre emisión en el EU-ETS post-2012, a las industrias que están más expuestas a la competencia internacional o a un « impuesto sobre el carbono » sobre las importaciones que provienen de países sin restricciones sobre el carbono. Los gobiernos de los países en desarrollo también han expresado sus preocupaciones ya que el fenómeno del refugio de la contaminación supone un grave problema para una eventual participación a una negociación post-Kyoto.

La urgencia del paradigma del Refugio de la Contaminación y su posible relación con la « fuga de carbono » sugiere la adopción de un principio de asignación de responsabilidad de CO₂ que tenga en cuenta una perspectiva complementaria sobre el problema. Los principios adoptados actualmente justifican la responsabilidad de CO₂ de un país basándose en la territorialidad de las emisiones: sólo se tienen en cuenta las emisiones relacionadas con los bienes y servicios producidos dentro de las fronteras nacionales, independientemente de dónde y quien consume dichos bienes. Este principio justificador de CO₂ concede entonces al país la responsabilidad de to-

¹ La fuga de carbono se define como un aumento en las emisiones de gases de efecto invernadero fuera de un país como resultado directo de la política para limitar las emisiones en dicho país.

publiés comme une « approche basée sur la production » pour la distinguer de « l'approche basée sur la consommation », adoptant ainsi une vision tout à fait différente pour imputer les émissions. Dans « l'approche basée sur la consommation » la responsabilité de CO₂ est en effet attribuée au pays en mesurant les émissions liées aux biens et services consommés au niveau national, y compris les biens produits dans le pays et ceux qui sont importés. Des écrits assez intéressants ont été publiés à ce sujet pendant la dernière décennie, Wiedmann et al. offrent un article complet et actualisé sur les études actuelles (Wiedmann et al. 2007), et plusieurs initiatives au niveau institutionnel ont été promues pour élargir le champ de comptabilité de CO₂ pour inclure une approche complémentaire basée sur un principe différent de responsabilité.

Pour pouvoir aborder les sujets de recherche relatifs à la consommation finale durable, de nouveaux outils et méthodes d'analyse ont été créés et les outils actuels ont été perfectionnés et répandus. Concernant les sujets de recherche sur la consommation durable, ce document centre l'attention sur l'utilité des instruments d'analyse d'Entrée-Sortie et leur prolongement dans ce champ spécifique. De même, le document présente la recherche actuelle dans ce domaine et traite les possibilités et les défis qui en surgissent pour analyser ces phénomènes dans le contexte méditerranéen.

2. Analyse de la Production et la Consommation Durables à travers la modélisation d'ES

Au niveau institutionnel, de nombreuses initiatives traitant la question de la consommation durable ont commencé à surgir dans les cinquante dernières années. L'Agenda 21, est un plan d'action adopté lors de la Conférence des Nations Unies sur l'Environnement et le Développement (CNUED) tenue à Rio de Janeiro en Juin 1992, et c'est une initiative pionnière qui a mis l'accent sur l'importance des modèles de consommation durable comme complément des technologies de production durable en affirmant que : « *la plus grande cause de la détérioration continue de l'environnement mondial est le modèle non durable de consommation et de production, plus particulièrement dans les pays industrialisés, ce qui représente un problème très grave et intensifie les déséquilibres et la pauvreté* ». L'Agenda 21 qui est clairement centrée sur la non durabilité et l'injustice des modèles de consommation actuels et sur les initiatives de recherches promues, l'analyse et la politique qui abordent le problème des modèles de consommation durable et les styles de vie. Une infinité d'initiatives de travail qui ont pour but l'implémentation pratique de ces idées et ambitions ont émergées tant au niveau international comme au niveau local. Parmi les plus connus, l'atelier et la table ronde organisés par le gouvernement norvégien, où a été créé le Réseau de la Consommation Durable (SC.net) du Programme des Nations Unies pour l'Environnement (PNUE). Lors du Sommet Mondial pour le Développement Durable, tenu à Johannesburg en 2002, le changement des activités actuelles de production et consommation dans les pays industrialisés a été à nouveau clairement mis de l'avant, comme étant un grand pas vers une voie de développement du bien-être qui comporte une utilisation des ressources moins intense ou bien d'intensité minimale. En Europe, la Commission Européenne a fait un premier pas vers l'implémentation d'une stratégie pour la consommation et la production durables. Le 16 juillet 2008, la Commission a adopté deux plans d'action pour la Consommation et la Production Durables (CPD) et pour une Politique Industrielle Durable (PID), envisageant une révision de la Directive EuP² pour élargir son champ d'action, d'abord sur les produits liés à la consommation d'énergie et finalement sur les au-

das las emisiones relacionadas con los bienes y servicios producidos a nivel interno, independientemente de si estos se consumen en el país o si se exportan. El principio territorial aparece también en literatura científica como « *enfoque basado en la producción* » para diferenciarlo del « *enfoque basado en el consumo* » adoptando una perspectiva totalmente diferente para denunciar las emisiones. Con el « *enfoque basado en el consumo* » la responsabilidad de CO₂ se atribuye, de hecho, al país midiendo la cantidad de emisiones relacionadas con bienes y servicios consumidos a nivel nacional, inclusive los productos producidos en el país y aquellos que se importan. Se han publicado escritos interesantes sobre el tema durante esta última década, Wiedmann et al. ofrecen un artículo completo y actual sobre los estudios que ya existen (Wiedmann et al. 2007), y se han fomentado muchas iniciativas a nivel institucional para ensanchar el campo de contabilidad de CO₂ para incluir un enfoque complementario, basado en un nuevo principio de responsabilidad.

Para tratar los temas de investigación relacionados con el consumo final sostenible, se han desarrollado nuevos instrumentos y métodos de análisis o bien se han perfeccionado y difundido aquellos que ya existían. En lo que al consumo sostenible se refiere, este documento se centra en la utilidad de los instrumentos de análisis de Entrada-Salida y sus extensiones en este campo en particular. Este documento también presenta un parte de las investigaciones del ámbito que están en curso, y trata sobre los desafíos y las oportunidades emergentes para analizar estos fenómenos en el contexto mediterráneo.

2. Análisis de Producción y Consumo Sostenibles mediante la modelización de ES

A nivel institucional numerosas iniciativas que tratan el problema del consumo sostenible han empezado a surgir en los últimos quince años. La Agenda 21, un plan de acción adoptado por las Naciones Unidas sobre el Medio Ambiente y el Desarrollo (CNUMAD) celebrada en Río de Janeiro en 1992, es una iniciativa pionera en destacar la importancia de los modelos de consumo sostenible como complemento de las tecnologías de producción sostenible afirmando que: « *La mayor causa del continuo deterioro del medio ambiente global es el modelo insostenible de producción y consumo, especialmente en los países industrializados, lo que supone un grave problema que acentúa la pobreza y los desequilibrios* ».

La Agenda 21 se centra claramente en la insostenibilidad y la injusticia de los modelos de consumo actuales y promueve iniciativas de investigación, análisis y políticas para afrontar el problema de los modelos insostenibles de consumo y de estilos de vida. Una infinidad de iniciativas de trabajo que tienen como objetivo la implementación práctica de estas ideas y ambiciones se han emprendido tanto a nivel internacional como a nivel local. Entre las más destacadas están el taller y la mesa redonda organizados por el gobierno noruego, en los que se creó la Red de Consumo Sostenible (SC.net) del Programa de las Naciones Unidas para el Medio Ambiente (PNUMA).

Durante la Cumbre Mundial sobre el Desarrollo Sostenible celebrada en Johannesburgo en el 2002, el cambio en las actividades actuales de producción y consumo en los países industrializados fue de nuevo destacado como un gran paso hacia el camino del desarrollo del bienestar mediante un consumo de recursos menos intenso o no intenso. En Europa, la Comisión Europea ha dado un primer paso hacia la implementación de una estrategia para alcanzar la producción y el consumo sostenibles. El 16 de julio de 2008, la Comisión adoptó dos planes de acción sobre Producción y Consumo Sostenibles (PCS) y sobre una Política Industrial Sostenible (PIS) con la previsión de una revisión de la Directiva EuP² para agrandar su

² La directive 2005/32/EC connu comme la Directive EuP présente un minimum d'exigences obligatoires pour les Produits Consommateurs d'Énergie.

² La Directiva 2005/32/EC conocida como Directiva EuP proporciona un mínimo de exigencias medioambientales obligatorias para los Productos que consumen Energía.

tres produits, une plus grande diffusion des labels de l'énergie et des Écolabels de l'UE et accélérer l'adoption tant des approvisionnements standard comme des avantages pour promouvoir l'achat de produits « verts ». Le Pan d'Action pour la Consommation et la Production Durables (CPD) a été reçu avec scepticisme par certaines personnes qui croient que ce sera difficile, à la pratique, de résoudre les conflits entre les intérêts des groupes industriels et ceux des parties écologistes, et plus spécialement de coordonner les interventions politiques au niveau national dans l'UE27.

Le choix de la meilleure stratégie et des mécanismes d'incitations appropriés pour favoriser l'introduction du « produit vert » sur le marché, ainsi que l'implantation précise de normes dans le cas de l'Écolabel et l'Écoconception, seront possible grâce à l'aide considérable de l'utilisation d'outils d'analyse quantitative ; parmi ses tâches l'analyste décide quel instrument, d'entre tous ceux qui sont disponibles de nos jours, s'ajuste le mieux aux besoins analytiques de chaque situation. La suite de cette partie détaille un groupe de méthodes qui proviennent des concepts de base de l'analyse d'Entrée-Sortie (Leontief 1996, Leontief 1970, Miller et Blair 2009).

En fait, même avec la prolifération actuelle de techniques sophistiquées de modélisation économique, dans un domaine quelque part dominé par une grande échelle, de modèles d'entreprise individuelle à intense exploitation de ressources (principalement CGE et modèles d'ES Économétriques), l'analyse d'Entrée-Sortie reste un outil essentiel pour l'évaluation de la politique dans le domaine des problèmes de la consommation et de la production durables. Plusieurs études de prospective des politiques environnementales peuvent être envisageables en faisant servir ce type d'outil ; trois domaines généraux sont définis ci-dessous, selon la portée de l'analyse et les différentes exigences en ce qui concerne les données et l'approche méthodologique : *Analyse du problème environnemental*, *Analyse prospective (impact) des politiques* et *Suivi et analyse ex post des politiques* (Eder et al. 2006).

L'*Analyse du problème environnemental* implique l'analyse de la nature et des causes des problèmes environnementaux, liés à l'utilisation de ressources et les émissions pertinentes pour la politique. L'application la plus importante de modèles d'EEIO à ce propos comporte l'analyse de :

- Impacts environnementaux sur le cycle de vie des groupes de produits (ex : voitures, viande, maisons, etc.) ;
- Impacts environnementaux sur le cycle de vie des catégories de dépenses de consommation, par catégorie de consommation (ex : impact de la consommation d'aliments par les ménages et impact de la consommation d'aliments dans les restaurants) ;
- Impacts environnementaux sur le cycle de vie par groupe consommateur (ex : les habitants d'une ville vs. le reste du pays, les propriétaires de voitures vs. ceux qui ne le sont pas, etc.) ;
- Impacts environnementaux sur le cycle de vie des produits (avec l'ACV à travers ce qu'on appelle l'hybride ACV-EEIO. Dans cet hybride ACV-EEIO, l'impact d'un produit spécifique est analysé avec l'ACV, et les impacts des chaînes de production qui ne sont pas incluses dans l'ACV sont évaluées avec l'aide de l'EEIO) ;
- Impacts sur le cycle de vie liés aux matières premières utilisées (ex : huile, cuivre, bois, etc.) ;
- Facteurs responsables des principales actions qui entraînent les impacts sur le cycle de vie citées dans les point ci-dessus. Exemples qui incluent l'importance relative des impacts dans les phases de gestion de l'extraction, production, utilisation et déchets de ressources ; l'importance relative des impacts des ménages et des impacts qu'entraînent les importations ; et le secteur qui contribue principalement aux impacts d'un groupe consommateur, des catégories de dépenses, ou d'un produit (groupe).

Le deuxième des groupes généraux des application déjà citées, *Analyse prospective de politiques*, implique l'évaluation de l'impact

campo de acción, centrado inicialmente en los productos consumidores de energía y abarcando, más tarde, otros productos, una mayor difusión de las etiquetas de energía y la Eco-etiqueta europea, así como la aceleración de la adopción tanto de aprovisionamientos estándar y incentivos para favorecer la compra de productos «verdes». El plan de acción de Producción y Consumo Sostenibles (PCS) ha sido percibido de manera escéptica por algunas personas que creen que será difícil, a la práctica, resolver los intereses conflictivos entre la industria y los ecologistas, y especialmente coordinar las intervenciones políticas a nivel nacional en el EU27.

La elección de la mejor estrategia y de los mecanismos de incentivo apropiados para favorecer la introducción del producto «verde» en el mercado, así como la fijación exacta de normas en el caso del Eco-etiquetado y el Eco-diseño, se ve fuertemente respaldada por el uso de instrumentos de análisis cuantitativo; entre las tareas de los analistas se encuentra la de decidir qué instrumento, entre los muchos de los que disponemos hoy en día, se ajusta mejor a las necesidades analíticas específicas de cada situación. La siguiente parte de esta sección explica con mayor detalle un conjunto de métodos que provienen de conceptos básicos de análisis de entrada-salida (Leontief 1966, Leontief 1970, Miller y Blair 2009).

De hecho, incluso con la proliferación actual de técnicas sofisticadas de modelización económica, en un ámbito, en cierta manera, dominado por modelos a gran escala de empresa individual de fuerte consumo de recursos (principalmente CGE y modelos de ES Económicos), el análisis de entrada-salida sigue siendo un instrumento esencial para la evaluación de políticas en el ámbito de la cuestiones de producción y consumo sostenibles. Se pueden prever muchos estudios de prospección sobre políticas medioambientales utilizando este tipo de instrumentos; a continuación se detallan tres grandes campos de alcance de los análisis y a los diferentes requisitos referentes a los datos y al enfoque metodológico, que son: *Análisis del Problema Medioambiental*, *Análisis Prospectivo (impacto) de Políticas* y *la Supervisión y Análisis ex post de Políticas* (Eder et al. 2006).

El *Análisis del Problema Medioambiental* comporta el análisis de la naturaleza y las causas de los problemas medioambientales, relacionados con el uso de recursos y emisiones significativas para las políticas. La aplicación más importante de modelos EEIO con este fin comporta el análisis de :

- Impactos sobre el ciclo de vida por grupos de productos (ej.: coches, carne, casas, etc.);
- Impactos sobre el ciclo vital por categorías de gastos de consumo, por categoría de consumo (ej.: el impacto del consumo de comida en casa y el impacto del consumo de comida en los restaurantes);
- Impactos sobre el ciclo de vida por grupo de consumidor (ej.: habitantes de una ciudad vs. el resto del país, propietarios de coches vs. los que no tiene, etc.);
- Impactos sobre el ciclo de vida por productos (combinados con ACV mediante el denominado híbrido ACV-EEI. En este híbrido LCA-EEIO, el impacto de un producto específico se analiza con ACV, y los impactos de las cadenas de producción no incluidos o eliminados del ACV, se evalúan con la ayuda de EEIO);
- Impactos sobre el ciclo de vida relacionados con los recursos primarios utilizados (ej.: petróleo, cobre, madera, etc.);
- Factores responsables de los principales impactos sobre el ciclo de vida. En los ejemplos se incluyen la importancia relativa de los impactos de las fases de extracción, producción, uso y gestión de los recursos; la importancia relativa de los impactos domésticos y los impactos que comportan las importaciones; y el sector que más interviene en los impactos por parte de un grupo consumidor, categoría de gasto o producto (grupo).

El segundo de los grandes grupos de dichas aplicaciones, *Análisis Prospectivo de Políticas*, implica la evaluación de impacto

ex-ante de mesures politiques et peut inclure l'analyse de tendance et scénario ; dans ce sens, la mise en pratique des analyses dans ce domaine exige non seulement l'application d'un modèle d'ES sur les données disponibles mais aussi la définition de scénarios politiques-technologiques sur plusieurs degrés de complexité, qui impliquent souvent la précision détaillée de technologies de production individuelles basées sur l'information ascendante (bottom-up). L'application la plus importante de modèles d'EEIO dans ce but comporte :

a) Les implications dans toute l'économie au niveau environnemental, de changements dans les styles de vie et les modèles de dépense de la consommation, tel que le changement des voyages aux services culturels et d'éducation ;

b) Les implications dans toute l'économie au niveau environnemental, d'augmentation ou de changement technique radical des produits ou de la production, tel que le changement de la production d'hydrogène basée sur le charbon pour une diffusion à grande échelle de technologies des piles à combustible, combiné à la saisie de carbone ;

c) Les implications dans toute l'économie au niveau environnemental, des mesures de réduction d'émissions, comme la réduction des poussières fines dans tous les procédés de combustion, y compris le passage à la prévention ;

d) Les implications dans toute l'économie au niveau environnemental des effets de prix, comme les impôts sur l'environnement et d'autres moyens d'internaliser les effets extérieurs (ou d'autres effets de prix dans les scénarios mentionnés ci-dessus).

L'étude des « Liens entre l'environnement, l'économie et les postes de travail » publié par la Commission Européenne (DG de l'Environnement) en 2007, est un autre exemple récent d'applications d'EEIO pour l'analyse prospective des politiques de l'UE. Cette étude a utilisé un modèle d'EEIO pour analyser les liens entre l'économie et l'environnement, y compris la fonction d'appui d'un environnement de bonne qualité pour beaucoup de secteurs dans l'économie. L'étude comprend des analyses prospectives de l'impact des politiques environnementales sur les postes de travail et sur l'emploi. On retrouve un autre exemple dans la préparation du « Rapport sur le Progrès en matière de Biocarburants » COM (2006) 845 et « Feuille de Route pour l'Energie Renouvelable » COM (2006)845, où un modèle basé sur l'ES, qui s'est répandu avec la spécification économétrique de la consommation des ménages et s'est aligné avec les simulations agro-énergétiques sectorielles, a été développé pour évaluer les impacts dans toute l'UE25 sur l'Emploi et le PIB de différents scénarios. L'étude sous-jacente a été publiée par Neuwahl et al. (2008).

Le troisième groupe d'applications est le « *Suivi et l'analyse ex post de politiques* », qui englobe l'analyse ex-post des impacts et de l'efficacité des mesures politiques, généralement en analysant des ensembles des données qui incluent des séries chronologiques comprenant l'espace de temps pertinent ; ceci indique aussi que la disponibilité de séries chronologiques des données environnementales et de comptabilités économiques comparables sur la totalité de l'espace de temps est essentielle. Les exemples importants de l'application de modèles d'EEIO dans ce but sont :

a) L'analyse de la relation entre l'impact environnemental, que se soit les émissions, le besoin total de matériel, ou un impact spécifique, et la production économique, à travers une variété d'intersections de l'économie (par exemple pour un secteur industriel spécifique, un groupe de produits concrets, une catégorie spécifique de dépense de consommation) ;

b) Concernant le point antérieur : le suivi des taux d'efficacité (impact par unité de valeur ajoutée émise) ;

c) Analyse de décomposition des changements observés dans les taux mentionnés ci-dessus (par exemple si la séparation entre les émissions de CO₂ et le développement économique est

ex - ante de medidas políticas y puede incluir tendencias de análisis de escenario; en este sentido, llevar a cabo un análisis en este ámbito requiere no sólo la aplicación de un modelo de ES en los datos disponibles sino también la definición de escenarios político-tecnológicos con grados de complejidad distintos, basándose en la información ascendente (bottom-up). La aplicación más importante de modelos EEIO con este propósito comporta:

a) Implicaciones medioambientales y otras a nivel de toda la economía de cambios en los estilos de vida y modelos de gastos de consumo, como un cambio de los viajes a los servicios culturales y educacionales;

b) Implicaciones medioambientales y otras a nivel de toda la economía de un cambio gradual o radical de los productos y las fabricaciones, como un cambio hacia la producción de hidrógeno basada sobre el carbono para una difusión a gran escala de tecnologías de pilas de combustible, combinado con el embargo de carbono.

c) Implicaciones medioambientales y otras a nivel de toda la economía de medidas de reducción de emisiones, como la reducción de polvo fino en todas los procesos de producción, incluye el cambio hacia la prevención;

d) Implicaciones medioambientales y otras a nivel de toda la economía de los efectos del precio, como los impuestos sobre el medioambiente y otras formas de internalizar los efectos externos (u otros efectos de precio en los escenarios arriba mencionados).

Un ejemplo reciente de aplicaciones de EEIO para análisis prospectivos de políticas de la UE, es el estudio «Conexiones entre el medio ambiente, la economía y los puestos de trabajo» publicado por la Comisión Europea (DG del Medio Ambiente) en el 2007. Este estudio usado en el modelo EEIO para analizar las conexiones entre la economía y el medio ambiente, incluyendo la ayuda de una buena calidad medioambiental para muchos sectores en la economía, integra unos análisis prospectivos del impacto de las políticas medioambientales sobre los puestos de trabajo y el empleo. Otro ejemplo es la elaboración del «Informe del Progreso de los Biocarburantes» COM (2006) 845 y de la «Hoja de Ruta de las Energías Renovables» COM (2006) 848, a partir del cual el modelo basado en ES, que se ha extendido con la especificación econométrica del consumo doméstico y se ha ajustado con las simulaciones agro-energéticas sectoriales. Fue creado para evaluar en toda la UE25, los impactos sobre el Empleo y el PIB de diferentes escenarios, y su estudio de trasfondo fue publicado por Neuwahl et al. (2008).

El tercer grupo de aplicaciones es la «*Supervisión y el Análisis ex post de Políticas*», e implica el análisis ex post de la eficiencia de las medidas políticas, de forma general, analizando el conjunto de datos, incluidas las series cronológicas, que comportan los espacios de tiempo pertinentes; esto también indica que la disponibilidad de series cronológicas de contabilidades económicas y datos medioambientales, comparables en todo el espacio temporal, es esencial. Unos ejemplos importantes de aplicación de modelos EEIO con este propósito son:

a) Análisis de la relación entre el impacto medioambiental, es decir las emisiones, la necesidad total de material, o un impacto específico, y el rendimiento económico, a través de una variedad de secciones transversales de la economía (por ejemplo para un sector industrial específico, un grupo de productos específico, una categoría de gasto de consumo específico);

b) En relación al punto anterior: supervisión de los índices de eco-eficiencia (impacto por unidad de valor añadido generado);

c) Análisis de desglose de los cambios observados en los índices arriba mencionados (por ejemplo si la desvinculación de las emisiones de CO₂ del desarrollo económico es debida a un cambio en los modelos de consumo, un cambio en la estructura tecnoló-

causée par un changement de modèles de consommation, un changement dans la structure technologique, dans la structure de production ou par un changement des facteurs des émissions).

Même si le cadre conceptuel de ce champ d'application est relativement simple, les exemples opérationnels pour l'ensemble de l'UE ou pour la région méditerranéenne sont rares. Ceci est principalement dû aux limitations en ce qui concerne la disponibilité de données, comme les séries chronologiques comparables des tables d'ES à prix stables avec suffisamment de couverture géographique, temporelle et environnementale, qui n'ont pas été à la portée de la main jusqu'à aujourd'hui. À l'échelle nationale, une des plusieurs études exemplaires est celle du Bureau Fédéral de Statistique Allemand pour les changements des émissions de dioxyde de carbone entre 1993 et 2000.

2.1. Projets de recherche récents en cours dans le domaine de la modélisation d'ES pour le SUSPROC

Parmi les études récentes basées sur l'ES dans le domaine de la consommation et la production durables qui utilisent une table complète d'ES pour toute l'UE, un exemple important est l'EIPRO (Impact Environnemental des Produits, IPTS/ESTO 2006), où la détection des domaines de consommation et production prioritaires qui montrent le potentiel d'amélioration environnementale, a été réalisé à partir d'une table d'ES de grande précision (plus de 400 groupes de produits et des centaines d'extensions environnementales) avec des soutiens environnementaux pour l'ensemble de l'UE25.

Beaucoup de suivis de l'étude de l'EIPRO ont été menés ou sont actuellement en cours d'analyse en détail du potentiel de progrès de différentes options politiques pour réduire les impacts environnementaux liés aux catégories de consommation identifiées comme porteuse des plus grands impacts environnementaux : automobiles, maisons y compris l'utilisation d'énergie des ménages et les produits alimentaires (notamment la viande). Ces études de suivi sont fondées sur une ample recherche ascendante de l'information d'ingénierie concernant les alternatives technologiques, et elles sont complétées par une évaluation socio-économique des alternatives basées sur l'analyse d'ES. Deux études concernant la production de viande et les changements de régime alimentaire (Weidema et al. 2008 et Tukker et al. 2009) ont déjà été complétées, et une étude supplémentaire sur le potentiel d'amélioration environnementale des voitures privées, (Nemry et al. 2009) sortira prochainement.

L'intérêt de la communauté politique concernant les méthodes d'ES pour l'analyse de la consommation et production durables a été aussi réaffirmé par le succès des projets basés sur l'ES en obtenant une subvention de projets à grande échelle dans le Programme-Cadre pour la Recherche et le Développement de la Commission Européenne (6ème PC, 7ème PC). Un des exemples les plus importants est l'EXIOPOL (un Nouveau Cadre de Comptabilité de l'Environnement qui Utilise les Données d'Externalité et des Outils d'Entrée-Sortie pour l'Analyse de Politiques), un Projet Intégré (IP) à grande échelle (5M d'Euros comme contribution de la CE) sous le 6ème Programme-Cadre pour la Recherche et le Développement de l'UE. Ce projet a commencé en Mars 2007 et il est prévu qu'il continue jusqu'en mars 2011. L'EXIOPOL a pour but de soutenir l'analyse du coût d'efficacité et du coût de bénéfice des technologies, des politiques, et de l'organisation normative au niveau micro, macro et meso, concernant plusieurs politiques de durabilité de l'UE. L'EXIOPOL IP a 3 objectifs principaux :

1. **Synthétiser et développer des évaluations rigoureuses sur les coûts externes pour l'Europe** relatifs à un grand ensemble d'activités économiques ;
2. **Établir un cadre environnemental étendu (EE) et complet d'Entrée-Sortie (ES)**, contenant des liens avec d'autres modèles

gica, en la estructura de la producción, o a un cambio en los factores de emisiones).

Aunque el marco conceptual de este campo de aplicación es relativamente sencillo, los ejemplos operacionales para toda la UE o para la región mediterránea son escasos. Esto es debido principalmente a las limitaciones en la disponibilidad de datos, ya que las series cronológicas de las tablas de ES a precios estables con suficiente cobertura de extensiones geográficas, temporales y medioambientales, no han estado al alcance de la mano hasta el día de hoy. A escala nacional, uno de los muchos estudios ejemplares es el de la Oficina Federal de Estadística de Alemania sobre los cambios de emisiones de dióxido de carbono entre 1993 y 2000.

2.1. Proyectos recientes y actualmente en curso en el campo de la modelización de ES para el SUSPROC

Entre los estudios recientes basados en ES en el campo de la producción y el consumo sostenibles que utilizan una tabla completa de ES para toda la UE, un ejemplo a tener en cuenta es el EIPRO (Impacto Medioambiental de Productos, IPTS/ESTO 2006), donde la presentación de los ámbitos prioritarios de consumo y producción, que muestran el potencial más importante de mejora medioambiental, se realizó con una tabla de gran precisión (más de 400 grupos de productos y centenares de extensiones medioambientales) con satélites medioambientales para el conjunto de la UE25.

Se han realizado y se siguen realizando muchas continuaciones del estudio EIPRO para analizar en detalle el potencial de mejora de diferentes alternativas políticas con el fin de reducir los impactos medioambientales relacionados con las categorías de consumo que se consideran causantes de los mayores impactos: coches, viviendas incluyendo el consumo doméstico de energía, y productos alimentarios (principalmente carne). Estos estudios posteriores se basan en una amplia investigación ascendente de información de ingeniería de las opciones técnicas, y se complementan con una evaluación socio-económica de las opciones basadas en el análisis de ES. Ya se han finalizado dos estudios relacionados con la producción de carne y los cambios de dieta (Weidema et al. 2008 and Tukker et al. 2009), y se espera hacer otro estudio sobre el potencial de mejora medioambiental de vehículos privados (Nemry y al 2009).

El interés de la comunidad política en los métodos de ES para la producción y el consumo sostenibles se confirma también por el éxito de los proyectos basados en ES por haber obtenido subvenciones en proyectos de gran escala, bajo el Programa Marco de Investigación y Desarrollo de la Comisión Europea (FP6, FP7). Uno de los ejemplos más destacables es el EXIOPOL (un Nuevo Marco de Contabilidad Medioambiental que usa Datos de Externos e Instrumentos de Entrada-Salida para el Análisis de Políticas), un Proyecto Integrado (IP) a gran escala (5M de Euros de contribución de la CE) bajo el 6.º Programa Marco para la Investigación y el Desarrollo. El proyecto se inició en marzo 2007 y se espera que continúe hasta el 2011. El EXIOPOL pretende apoyar el análisis de coste de eficiencia y coste de beneficio de las tecnologías, políticas, organización normativa, a un nivel micro, meso y macro, respecto a varias políticas sobre sostenibilidad de la UE. El EXIOPOL IP tiene 3 objetivos principales:

1. **Sintetizar y desarrollar evaluaciones exhaustivas de los costes externos para Europa**, sobre un amplio conjunto de actividades económicas.
2. **Establecer un marco de Entra-Salida (ES) medioambientalmente extendido (EE) y completo**, que comporte conexiones con otros modelos socio-económicos, en los que se incluyen el máximo número posible de estas evaluaciones. Tal base de datos de EE ES todavía no existe en la UE27. Esta actividad de recopilación

socio-économiques, dans lesquels il y aurait un maximum de ces évaluations. Une telle base de données d'EE ES pour l'UE27 n'existe pas encore. Cette activité de compilation de données permettra à l'évaluation des impacts sur l'environnement d'obtenir un coût externe des activités de différents secteurs économiques, des activités totales de consommation et de consommation de ressources pour les pays de l'UE ;

3. **Appliquer les résultats** des coûts externes estimés et l'analyse d'EE SE pour **l'analyse de sujets politiques importants**, ainsi qu'évaluer l'impact des recherches antérieures sur les coûts externes dans la prise de décisions politiques dans l'UE.

La structure des données de l'EXIOPOL EE-SE aura les caractéristiques suivantes : 27 pays de l'UE et ~15 partenaires commerciaux principaux ; en accord avec les comptabilités nationales publiées par l'Eurostat et avec des détails supplémentaires sur l'agriculture, l'énergie, le pétrole, le transport, les activités de consommation intense d'énergie et d'élimination de déchets, jusqu'à 130 secteurs ; interconnectés par des matrices de commerce bilatérales ; comportant des soutiens socio-économiques et environnementaux pour un ample éventail de polluants, des estimations d'utilisation de ressources et de coûts externes, comprenant les impacts environnementaux liés aux activités de consommation finale et d'élimination de déchets ; pour la base annuelle de l'an 2000, pouvant être facilement actualisée, avec une extrapolation démonstrative prévue pour l'année 2005. Il est prévu que la Commission Européenne, à travers les JRC IPTS, maintienne, actualise et applique aux analyses les données de l'EXIOPOL EE-ES après l'achèvement du projet.

Un élargissement supplémentaire du travail de l'EXIOPOL est en cours de discussions avec la proposition du projet WIOD (Base de Données Mondiale d'Entrée-Sortie, Compilation et Applications) qui est actuellement en phase de proposition au 7ème Programme-Cadre, lequel pourrait déjà s'initier en 2009. Ce projet aurait un double objectif. Le premier but est de construire une base de données de tables d'entrée-sortie nationales, qui sont reliées par les flux de commerce internationaux, créant ainsi ce qu'on appelle les tables internationales. Une table internationale contient de l'information, par exemple, sur l'utilisation de peintures de l'industrie automobile allemande, qui sont produites par l'industrie chimique indienne. Ces tables sont reliées à un grand éventail d'indices environnementaux et socio-économiques. En comparaison avec l'EXIOPOL, le WIOD aurait beaucoup moins de détails sectoriels (ca. 30 secteurs), mais d'un autre côté il produirait les séries chronologiques (environ 90 ou plus) qui sont indispensables, par exemple, les applications d'analyses de rétrospective décrites dans le point (3) de la partie antérieure. Le deuxième objectif est d'appliquer la base de données pour les analyses intégrales et cohérentes des effets de l'augmentation du commerce international et de la croissance économique dans le développement socio-économique et environnemental, pour renforcer notre compréhension de leurs interrelations et pour guider les décisions politiques. En plus des exemples importants d'initiatives de recherche dans le domaine de la Consommation et la Production Durables promus par la Commission Européenne, il y a aussi ceux qui sont basés sur l'utilisation du Projet d'Analyse du Commerce Mondial (GTAP) (Berrittella et al. 2007, Neuwahl et al. 2008, Peters et al. 2008). Le GTAP a démarré comme un projet de recherche à l'Université de Purdue (USA) au début des années quatre-vingt avec le but d'établir un cadre commun de données pour l'analyse quantitative des problèmes politiques de commerce (Hertel T.W., 1997).

Depuis le lancement de la première version de la base de données en 1993, le GTAP a vécu une amélioration constante y compris l'augmentation des comptabilités du soutien environnemental. La septième et la plus récente version du GTAP trace des tables d'ES pour 113 régions couvrant 57 secteurs économiques, avec une

évaluation qui permettra que la évaluation de los impactos medioambientales disponga de costes externos de actividades diferentes sectores económicos y del consumo de recursos de los países de la UE;

3. **Aplicar los resultados** del coste externo estimado y el análisis EE ES **para analizar cuestiones políticas importantes**, así como para evaluar el impacto de investigaciones anteriores sobre el coste externo de la toma de decisiones políticas en la UE.

La estructura de la base de datos EXIOPOL EE-ES constará de las siguientes características: 27 países de la UE y ~15 socios comerciales principales; en concordancia con las contabilidades nacionales publicadas por Eurostat pero con información complementaria sobre las actividades referentes a la agricultura, la energía, el petróleo, el transporte y la eliminación de residuos, hasta en 130 sectores, interconectados mediante unas matrices comerciales bilaterales; incluidos satélites socio-económicos y medioambientales para un amplio número de contaminantes, evaluaciones del uso de recursos y costes externos, inclusive los impactos medioambientales relacionados con las actividades de eliminación de residuos y consumo final; para la base única del año 2000, siendo fácilmente modificada, con una extrapolación demostrativa prevista para el año 2005. Se prevé que la Comisión Europea, mediante el JRC IPTS, mantenga, actualice y solicite el análisis de la base de datos EXIOPOL EE-ES tras la finalización del proyecto.

Otra extensión del trabajo de EXIOPOL está en proceso de discusión por la propuesta del proyecto WIOD (Base de Datos Mundial de Entrada-Salida, Recopilación y Aplicaciones), que está actualmente en fase de propuesta bajo el 7.º Programa Marco, que podría iniciarse en 2009. Este proyecto tendría un doble objetivo. El primero sería construir una base de datos mundial con tablas nacionales de Entrada-Salida, conectadas mediante los flujos de comercio internacional, creando lo que se llama tablas internacionales. Una tabla internacional contiene información sobre, por ejemplo, el uso de la industria alemana de pinturas producidas por la industria química india. Estas tablas están conectadas a una amplia gama de índices socio-económicos y medioambientales. En comparación con EXIOPOL, el WIOD contiene mucha menos información sectorial (ca. 30 sectores), pero por otra parte proporciona las series cronológicas (más de 90) que son indispensables para, por ejemplo, las aplicaciones de análisis prospectivos expuestos en el punto (3) de la sección anterior. El segundo objetivo es el de emplear la base de datos en análisis, integrales y coherentes, de los efectos del crecimiento de la economía y del comercio internacional sobre el desarrollo socio-económico y medioambiental, para mejorar nuestra comprensión de estas conexiones y guiar la toma de decisiones políticas.

Además de los ejemplos fomentados por la Comisión Europea, se destacan ejemplos importantes de iniciativas en este campo de Producción y Consumo Sostenibles, que se basan en el uso del Proyecto de Análisis del Comercio Mundial (GTAP) (Berrittella et al. 2007, Neuwahl et al. 2008, Peters et al. 2008). El GTAP se inició como un proyecto de investigación en la Universidad de Purdue (EEUU) a principios de los noventa, con el fin de establecer un marco común de base de datos, para el análisis cuantitativo de problemas políticos del comercio mundial (Hertel T.W., 1997). Desde el lanzamiento de la primera versión de la base de datos en 1993, el GTAP ha ido mejorando de forma continua, incluyendo las extensiones de la contabilidad satélite del medio ambiente. La séptima y más reciente versión de GTAP traza tablas de ES para 113 regiones, abarcando 57 sectores económicos, con una gran precisión en el sector agrícola. Asimismo, la ampliación de las tablas de ES monetarias con datos sobre uso energético por sectores, emisiones de gases de efecto invernadero y utilización del suelo, hace que el GTAP sea una referencia de datos para la implementación

grande précision dans l'agriculture. De plus, l'ampliation des tables d'ES monétaires contenant des données sur l'utilisation sectorielle d'énergie, les émissions de gaz à effet de serre et l'utilisation du sol, font du GTAP une référence de données pour l'implémentation de modèles qui visent les questions politiques concernant le changement climatique, comme celle débattues dans les réunions du Groupe d'Experts Intergouvernemental sur l'Évolution du Climat (GIEC).

2.2. Outils de recherche appliquée centrée sur la consommation durable

Les ménages absorbent en Europe (UE27) plus de 30% du total brut de la production, ce qui explique le lien de cause-effet entre la production et la consommation ainsi que, d'une manière inhérente, le lien entre les activités de consommation d'un ménage et l'utilisation de ressources naturelles ou la pollution de l'air. Par conséquent, l'analyse des facteurs déterminants des habitudes de consommation et des styles de vie des ménages devient très pertinente pour mieux tracer les politiques de durabilité. Un grand nombre de documents sur ce sujet ont été publiés (Ferrer-i Carbonell et al. 2004, Brännlund et al. 2007, Kletzan et al. 2002). Dans ce domaine, les outils d'analyse d'ES sont souvent complétés avec une précision plus détaillée sur le comportement des consommateurs, ce qui peut être illustré statistiquement avec un ensemble de données de statistiques du budget ménageur comme celui publié par l'Eurostat (2007), fournissant les données des dépenses des ménages européens pour les différents propos de consommation. C'est le cas, par exemple, du projet de l'EIPRO où les styles de vie des ménages européens sont représentés en utilisant les statistiques ménagères qui mesurent la distribution du budget entre plusieurs propos de consommation classifiés par le COICOP³. Ou bien avec un système plus complet de la demande des ménages qui inclut l'élasticité du prix de revenu estimé de façon économétrique, ainsi que d'autres paramètres qui illustrent l'influence d'autres caractéristiques socio-démographiques des ménages sur la consommation. Dans ce dernier cas, l'ampliation du modèle d'ES de base est plus précise et dotée d'un plus grand potentiel analytique. Un exemple qui utilise cette approche est le travail de Labandeira et de Labeaga réalisé en 1999, qui analyse les effets de la distribution des impôts sur le carbone en Espagne, avec le modèle d'ES combiné avec un système de demande des ménages calculé de façon économétrique. Un écrit important dans ce champ spécifique, est le travail récent de Yoo et Hewings (2006), qui quantifient l'importance de d'assouplir la supposition d'un « consommateur représentatif » dans un modèle de prospective macroéconomique qui a comme centre l'Entrée-Sortie, en intégrant un système de demande qui différencie les ménages selon leur composition, leur revenu et l'âge.

Plus précisément, un système de demande ménagère montre comment les ménages distribuent leurs dépenses de consommation parmi les différentes catégories de consommation en fonction de leur dépense générale, le prix relatif de toutes les catégories de consommation spécifiées et d'autres caractéristiques socio-démographiques de ces ménages, tels que la taille, la composition, l'emplacement, l'âge du représentant de famille ou le nombre de voitures dont ils disposent. Le système de demande comprend la décision de distribution du budget et les démarches ultérieures, ce qui signifie que le consommateur représentatif destine d'abord l'ensemble des dépenses dans les produits durables et non durables, ensuite dans les dépenses destinées aux produits non durables dans les catégories des aliments, de l'énergie, du transport,

de modèles centrés en el cambio climático relacionado con problemas políticos, como aquellos debatidos en las reuniones del Grupo Intergubernamental de Expertos sobre el Cambio Climático (GIECC).

2.2. Instrumentos de investigación aplicada centrados en el consume sostenible

Los hogares absorben en Europa (UE27) más del 30% del total bruto de la producción, lo cual indica la conexión de causa-efecto entre la producción y el consumo, así como, de forma implícita, la conexión entre el consumo doméstico y el uso de recursos naturales o la contaminación del aire.

Por consiguiente, analizar los factores que determinan los hábitos y estilos de vida de los consumidores resulta ser de gran relevancia para ajustar mejor las políticas para la sostenibilidad. Asimismo se ha publicado un gran número de documentos sobre el tema (Ferrer-i Carbonell et al. 2004, Brännlund et al. 2007, Kletzan et al. 2002).

En este contexto, los instrumentos de análisis de ES se extienden a menudo a particularidades más específicas del comportamiento de los consumidores, lo que se puede presentar de forma estadística con un conjunto de datos estadísticos de presupuestos familiares como el que publicó el Eurostat (2007), y que proporciona los datos de los gastos domésticos europeos según las diferentes finalidades de consumo.

Este es el caso, por ejemplo, del proyecto EIPRO donde se presentó el estilo de vida de los consumidores europeos, usando estadísticas familiares que miden la distribución del presupuesto entre diferentes finalidades de consumo clasificadas por el COICOP³, o con un sistema más completo de demanda doméstica que incorpora la elasticidad del precio de ingreso estimado de forma econométrica, así como otros parámetros que reflejan la influencia de otras características socio-demográficas de las familias sobre el consumo. En este último caso, la extensión del modelo básico de ES es más precisa y contiene un mayor potencial analítico. Un ejemplo que utiliza este enfoque es el trabajo de Labandeira y Labeaga realizado en 1999, y que analiza los efectos de distribución de impuestos sobre el carbono en España, mediante un modelo de ES combinado con un sistema de demanda doméstica estimada de forma econométrica. Un escrito destacable en este campo, es el trabajo reciente de Yoo y Hewings (2006), que cuantifica la importancia de suavizar el supuesto del «consumidor tipo» en un modelo de previsión macroeconómica centrado sobre la Entrada-Salida, introduciendo un sistema de demanda que distingue las familias según la composición, los ingresos y la edad. Concretamente, un sistema de demanda doméstica describe como las familias distribuyen sus gastos de consumo en diferentes categorías de consumo en función del gasto total, el precio relativo de todas las categorías de consumo especificadas y otras características socio-demográficas de estas familias, como el tamaño, la composición, la ubicación, la edad de la persona representante o bien el número de vehículos de los que disponen. El sistema de demanda comprende la decisión de distribución del presupuesto y los pasos consiguientes, lo que muestra como el consumidor tipo destina primero el gasto total entre productos durables y no durables, luego en una segunda fase, destina los gastos entre productos no durables en las categorías de comida, energía, transporte, servicios, etc. A continuación se muestra una representación esquemática de un sistema de demanda en la Ec.(1):

³ L'acronyme COICOP signifie Classement de la Consommation Individuelle selon le Propos, et c'est le nom utilisé pour le système de classement officiel adopté au niveau international et proposé au début des années 90 par le bureau de statistique des NU.

³ El acrónimo COICOP significa Clasificación del Consumo Individual por Finalidad, y es el nombre usado para este plan oficial de clasificación adoptado a nivel internacional y propuesto a principios de los noventa por la oficina de estadística de las Naciones Unidas.

des services, etc. Un système de demande est illustré ci-dessous avec un schéma représentatif :

$$w_i = f(p_i, x_i, z_i) \quad (1)$$

Dans ce schéma, w représente la part de consommation d'une catégorie spécifique de consommation, p représente le prix de la catégorie elle-même et de l'autre, x est le revenu total ou les dépenses totales et z représente l'ensemble des caractéristiques socio-démographiques introduites pour faciliter une meilleure représentation et distinction de la consommation ménagère. Les indications i et j représentent respectivement la catégorie et la groupe type de consommation.

L'assemblage d'un modèle d'ES et un groupe de consommation ménagère requière une cohérence des deux en ce qui concerne le classement et le système d'évaluation utilisé. En fait, les statistiques des dépenses ménagères, ainsi que le système de demande ménagère sont généralement estimés au prix de l'acheteur et classés selon le COICOP, alors que le cadre de modélisation d'ES est habituellement estimé aux prix de base et suit un système de classement de produit par produit et industrie par industrie (CPA et NACE respectivement dans le Système Européen de Comptabilité). Par conséquent, tant pour les modèles de « quantité » ou de « prix », les données de la consommation montrent une discordance entre le système d'évaluation adopté (prix de l'acheteur vs. prix de base) et le système de classement de biens (COICOP vs. CPA). Mongelli et al. Montrent comment relier correctement un modèle d'ES avec un groupe de consommation ménagère (Mongelli et al. 2008).

3. Défis et possibilités dans la région méditerranéenne

En novembre 1995 un accord nommé Partenariat Euro-Med ayant pour but la libéralisation du marché dans la région méditerranéenne est née de la « Déclaration de Barcelone » entre les pays de l'UE15 et l'Algérie, Chypre, Israël, Jordanie, Liban, Malte, l'Autorité Palestine, Syrie, Tunisie, et Turquie. Le champ central du Partenariat Euro-Med est la création d'une Zone Méditerranéenne de Libre Echange (ZMLE), qui doit être en principe appliquée vers le 2010 et établira un régime d'échange libre de taxes et de frais de douane pour les biens et services.

Le Partenariat Euro-Med est déjà en train de contribuer à fortifier la relation commerciale entre les pays méditerranéens et il a favorisé les échanges commerciaux dans la région. 9,7 pour-cent des exportations totales de l'UE en 2001, notamment des machineries, équipements de transport et produits chimiques, ont été destinées à des pays méditerranéens (MED) appartenant à l'accord, alors que le 7,5 pour-cent des importations totales de l'UE provenaient de pays MED, principalement des produits agricoles et textiles. Le taux de croissance annuelle moyenne des exportations européennes vers les pays MED est de 8 pour-cent. Parmi les partenaires commerciaux méditerranéens, la Turquie est le pays avec les plus grands flux d'importation et d'exportation avec l'UE. Selon des statistiques récentes sur le commerce, l'UE est clairement le premier importateur de la Turquie, qui en plus représente un marché pertinent pour les exportations européennes, et qui est classé 5ème parmi les pays où exporte l'Europe (UE-Échange Méditerranéen. Mémo - Marseille, 2 juillet 2008). Les flux commerciaux entre l'UE et les pays MED augmentent aussi au niveau des services, parmi lesquels le tourisme est un secteur de spécial intérêt.

Bien que le renforcement de la relation commerciale entre l'UE et les pays MED représente une chance de promouvoir le développement économique ainsi que la cohésion sociale et territoriale, cela pourrait aussi causer des conséquences adverses au niveau économique, social et environnemental, si le champ du processus de libéralisation du marché dans la Méditerranée ne s'élargissait pas. Cet étude d'évaluation d'impact a été chargée par la Commission Européenne pour analyser les possibles effets

$$w_i = f(p_i, x_i, z_i) \quad (1)$$

En este esquema w representa la parte de consumo de una categoría específica, p el precio de la categoría así como de la otra, x representa el ingreso total o el gasto total y z el conjunto de características socio-demográficas introducidas para una mejor representación y diferenciación del consumo doméstico. Los índices i y j son la categoría de consumo y el tipo de familia respectivamente.

La asociación de un modelo de ES con un conjunto de consumo doméstico requiere una cierta coherencia de ambos, en cuanto a la clasificación y al sistema de valoración utilizado. De hecho, las estadísticas de gasto doméstico, así como un sistema de demanda doméstica, se valoran generalmente por el precio del comprador y se clasifican según la COICOP, mientras que el marco de modelización de ES normalmente se valora según los precios de base y sigue un plan de clasificación de producto por producto o de industria por industria (respectivamente CPA y NACE del Sistema Europeo de Cuentas). Así pues, tanto para los modelos de « cantidad » como de « precio », los datos de consumo muestran un desajuste en cuanto al sistema de valoración adoptado (COICOP vs. CPA). Mongelli et al. describen como conectar correctamente un modelo de ES a un conjunto de consumo doméstico (Mongelli et al. 2008).

3. Desafíos y oportunidades en la región mediterránea

En noviembre del 1995, se estableció un acuerdo llamado Asociación Euromed, que tiene como objetivo la liberalización del comercio en la región mediterránea, en el «Convenio de Barcelona» entre países de la UE15 y Argelia, Chipre, Egipto, Israel, Jordania, Líbano, Malta, la Autoridad Palestina, Siria, Túnez y Turquía. La atención de la Asociación Euromed se centra en la creación de un Zona Euromediterránea de Libre Comercio (ZEMLC), la cual se prevé implantar hacia el 2010 y se establecerá un régimen de intercambio comercial libre de impuestos y aranceles de aduana para los bienes y servicios.

La Asociación Euromed ya está contribuyendo al refuerzo de las relaciones comerciales entre países mediterráneos y ha fomentado los intercambios comerciales en la región. El 9,7% del las exportaciones totales de la UE en 2007, principalmente maquinaria, equipamientos de transporte y productos químicos, iban destinados a países mediterráneos (MED) pertenecientes al acuerdo, mientras que el 7,5% de las importaciones totales de la UE provenían de países MED, principalmente productos agrícolas y textiles. El desarrollo anual medio de las exportaciones europeas hacia países MED es del 8%. Entre los socios comerciales del Mediterráneo, Turquía es el país con los mayores flujos de importación y exportación con la UE.

Según unas estadísticas comerciales recientes, la UE es de lejos la primera región importadora de Turquía, que representa también un mercado significativo para las exportaciones europeas, situándose como número cinco entre los países donde Europa dirige sus exportaciones (Memo. Comercio Mediterráneo-UE - Marsella, 2 de julio 2008). Los flujos comerciales entre la UE y los países MED también aumentan en servicios, siendo el turismo un sector de especial interés.

Mientras el refuerzo de las relaciones comerciales entre la UE y los países MED representa una oportunidad para fomentar el desarrollo económico así como la cohesión territorial y social, también podrían aparecer fuertes consecuencias adversas a nivel económico, social y medioambiental si el alcance del proceso la liberalización el Mediterráneo no se extendiera, para implantar medidas políticas que no se limiten a una mera supresión de impuestos y aranceles. Estas son las conclusiones generales mostradas por el único estudio, que se conoce, de evaluación de

sociaux, économiques et environnementaux du processus de libéralisation du marché dans la région méditerranéenne, et elle a été menée par un consortium dirigé par l'Université de Manchester (Commission Européenne, 2007).

Une relation commerciale plus étroite entre les pays, qui caractérise ces fortes différences, produira sûrement des changements structurels dans les systèmes économiques tant pour les technologies adoptées dans la production comme pour les styles de vie des foyers. Dans ce contexte, la disponibilité des ensembles de données et les cadres de modélisation provenant des projets de recherche, tels que l'Exiopol et le WIOD, décrits dans les parties antérieures de ce document, offrent la possibilité d'analyse de scénarios de possible technologie et consommation des ménages, et de guider la sélection des mesures politiques qui s'ajustent le mieux pour le développement économique durable dans la région méditerranéenne. Les cadres de données déjà cités méritent un spécial intérêt, en tant qu'outil qui facilite la négociation d'accords environnementaux. Les problèmes mondiaux d'environnement, comme le changement climatique, sont abordés en négociant le niveau d'engagement de chaque pays concernant la responsabilité d'émissions des polluants. Au niveau du changement climatique, la partie d'introduction de ce document, traite les deux principes qui peuvent être adoptés pour justifier la responsabilité des émissions de gaz à effet de serre, nommés « approche de production » et « approche de consommation », y compris leurs caractéristiques respectives. Dans ce sens, les tables d'Entrée-Sortie avec des portées environnementales comme la comptabilité des émissions de gaz à effet de serre, sont peut être l'outil par excellence pour définir correctement et de façon cohérente la responsabilité de réduction de chaque pays.

Au fur et à mesure que le processus de libéralisation du marché dans la Méditerranée avance, avec un peu de chance, avec l'implémentation de mesures qui visent l'élimination des effets adverses sociaux et environnementaux qui y sont liés, les analyses prospective sont nécessaires au niveau stratégique pour recueillir les bénéfices propres du développement économique et la disponibilité des ensembles de données multi-régionaux, étant donné que le GTAP, l'Exiopol ou le WIOD peuvent fournir le cadre de données nécessaire pour ce type d'analyse. Le plus grand défi est le manque de données statistique harmonisées pour la plupart des pays de la MED. Le GTAP inclut les tables d'ES que pour la Turquie, Égypte, Maroc et Tunisie, alors que le reste des pays MED sont inclus dans des tables du « Reste de l'Afrique du Nord » ou du « Reste de l'Asie de Occidentale ». L'Exiopol et le WIOD prévoient l'intégration de tables d'ES précises et des plus amples actions environnementales que pour la Turquie, le reste des pays méditerranéens étant classés dans une table générale d'Entrée-Sortie du Reste du Monde. Cependant, les sources statistiques qui peuvent être incluses dans ces ensembles de données forment aussi un programme de coopération entre l'Eurostat et les Bureaux Nationaux de Statistiques des pays méditerranéens (Eurostat-MEDSTAT) et nous sommes convaincu que l'effort pour harmonisation et inclure ces données dans le but de couvrir cette lacune, en vaut la peine et devrait être poursuivi inlassablement.

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impacto que se ha realizado hasta ahora sobre el proceso de liberalización del comercio en la región mediterránea. Este estudio de evaluación de impacto fue encargado por la Comisión Europea, para analizar posibles efectos sociales, económicos y medioambientales del proceso de liberalización del comercio en la región mediterránea, y ha sido realizado por un consorcio dirigido por la Universidad de Manchester (Comisión Europea, 2007).

Una relación comercial más estrecha entre los países, que implica tales diferencias, probablemente produzca cambios estructurales en los sistemas económicos implicados, por las tecnologías adoptadas para la producción y en los estilos de vida familiares. En este sentido, la disponibilidad de bases de datos y marcos de modelización que provienen de proyectos de investigación, como Exiopol y WIOD, definidos en una sección anterior de este documento, ofrece la oportunidad de analizar los posibles escenarios de consumo tecnológico y doméstico, y un guía en la elección de las medidas políticas más adecuadas, para fomentar el desarrollo económico sostenible en la región mediterránea. El uso de los marcos de datos mencionados, merece una atención especial, ya que es un instrumento que facilita la negociación de acuerdos medioambientales. Los problemas medioambientales mundiales, como por ejemplo el cambio climático, se afrontan mediante la negociación del compromiso de cada país en base a la responsabilidad de emisiones.

Respecto al cambio climático, la introducción de este documento trata sobre dos principios que se podrían adoptar para justificar la responsabilidad de emisiones de gases de efecto invernadero, denominados «enfoque sobre la producción» y «enfoque sobre el consumo», juntamente con sus respectivas características. En este sentido, las tablas de Entrada-Salida con extensiones medioambientales como las justificaciones de los gases de efecto invernadero son quizás el instrumento por excelencia para cuantificar correctamente y de forma coherente el compromiso de reducción de cada país.

A medida que el proceso de liberalización del comercio en el Mediterráneo continúa, con un poco de suerte acompañado de medidas para eliminar los efectos sociales y medioambientales adversos que se le asocian, los análisis prospectivos se hacen estratégicamente necesarios para lograr los beneficios propios del desarrollo económico y la disponibilidad de conjuntos de datos multiregionales, ya que el GTAP, Exiopol o WIOD pueden proporcionar el marco de datos necesario para este tipo de análisis. El principal desafío es la carencia de datos estadísticos armonizados en la mayoría de los países MED. El GTAP integra tablas de ES sólo para Turquía, Egipto, Marruecos y Túnez, mientras el resto de países MED se incorporan en unas tablas llamadas «Resto de África del Norte» y «Resto de Asia Occidental». El Exiopol y WIOD prevén la introducción de tablas de Entrada-Salida precisas y extensiones medioambientales sólo para Turquía, e incluyen el resto de países mediterráneos en una tabla general llamada tabla de Entrada-Salida para el Resto del Mundo. Sin embargo, existen fuentes estadísticas que pueden integrarse en estas bases de datos, así como un programa oficial de cooperación entre el Eurostat y las Oficinas Nacionales de Estadística de los países mediterráneos (Eurostat. MEDSTAT) y creemos que el esfuerzo para armonizar e incluir estos datos para complementar este vacío, vale la pena y debería llevarse a cabo con determinación.

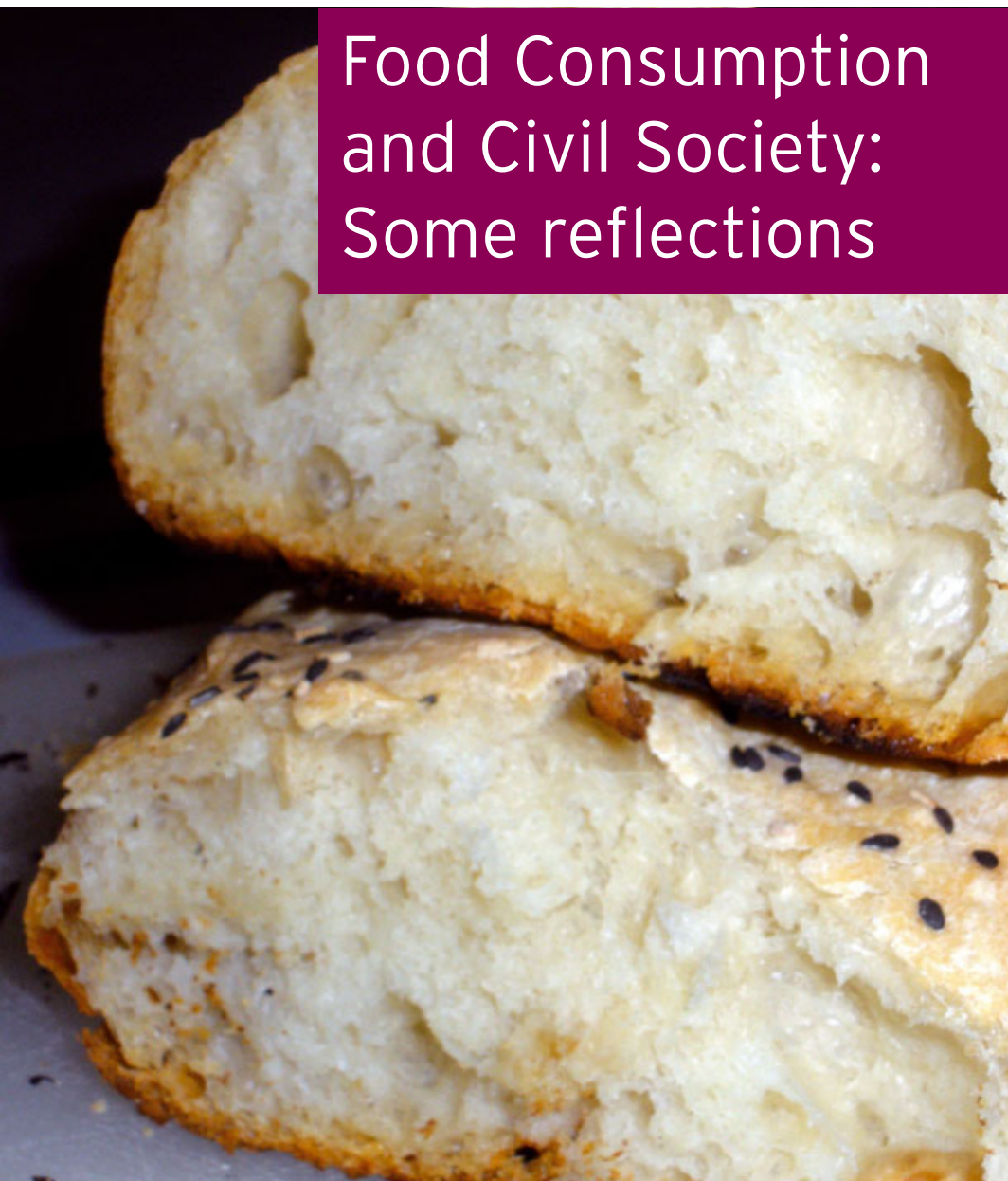
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Food Consumption and Civil Society: Some reflections



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In the developed countries, the large number of industrial processes and transformations of all kinds which food goes through before reaching the consumer generates in the latter a blind mistrust towards it. More and more often, people pursue going back to the origins that give them credibility and calmness when it comes to eating, and concepts like “traditional”, “home-made” and “grandmother’s recipe” succeed. Companies have been able to capture this and have now ventured to exploit this growing trend, not only by means of publicity but also through a change in tradition.

Keywords: food, tradition, trust, naturalness, childhood.

Consommation alimentaire et société civile : quelques réflexions

Dans tous les pays développés la grande quantité des procédés industriels et les transformations de tout type que subissent les aliments avant d’arriver au consommateur final font que celui-ci sente une méfiance aveugle envers lesdits produits. De plus en plus l’individu tente de retourner aux origines qui apportent la crédibilité et la tranquillité lorsqu’il s’agit de s’alimenter et des concepts du type « traditionnel », « fait à la maison » ou « recette de grand-mère » triomphent. Les entreprises ont su capter cette audience et se sont lancées à exploiter cette tendance croissante, non seulement à travers la publicité, mais aussi par un changement de la tradition.

Mots clés : aliment, tradition, confiance, naturel, enfance.

Consumo alimentario y sociedad civil: algunas reflexiones

En los países desarrollados, la gran cantidad de procesos industriales y transformaciones de todo tipo por las que pasan los alimentos antes de llegar al consumidor final hacen que éste genere una desconfianza ciega hacia ellos. Cada vez más, se busca retornar a los orígenes, que aporten credibilidad y tranquilidad a la hora de alimentarse y triunfan conceptos como «tradicional», «hecho en casa» o «receta de la abuela». Las empresas han sabido captar esta tendencia, y ahora se han lanzado a explotar esta tendencia creciente, no sólo a través de la publicidad, sino incluso del cambio de tradición.

Palabras clave: alimento, tradición, confianza, naturalidad, infancia.

More than one thousand million people are still starving in the world

During almost the whole 20th century, but especially in the second half, transformations in the food field have gone on progressively faster and faster every time. In societies with a higher socioeconomic development, with markets well provided with food, this fact, in general terms, has involved a larger production and distribution of products at an industrial level and a more fluid access to a large extent of food by the public, at much more accessible prices. In developing countries, with home economies –and not only home economies– very attached to small production and subsistence agriculture, such process has affected in very different ways, and not always positively. The reality is that, as it is concluded from the data published in the very recent food security summit occurred in Madrid in January 2009, more than one thousand million people are still starving in the world.



Knowledge is trust

In the developed countries, the argument, however, is different. With a rather ironic tone, a journalist mentioned in the Spanish press not long ago, in a discussion article about the new food crises, that “the difference between poor and rich countries is that in the first ones people don’t know when they are going to eat, and in the second ones they don’t know what they eat”. But on the other hand, we find that such production, nowadays more massified and industrialized than ever, has likewise seen itself affected in a different way: by different health problems (diseases, infections, etc.) related to their production as well as, and consequently, by a growing mistrust among the population towards the food they consume. Thus, nowadays it is impossible not to emphasize the doubts and the feeling of danger connected to the impossibility of control over industrial production processes by broad strata of consumers. In the same way, we are living times where urban people –most of the population in industrialized countries– have contact with only end elements of the chain, that is, final points of distribution and products. This implies that, concerning food, consumers’ trust is given for granted in phases of the process which are absolutely unknown by them, leaving out the ignorance of the processes undertaken by experts, who are entrusted with the control of the different phases of the process that extends from the earliest stages of production to the table, through the factory and the supermarket. The consumer, in short, gets further and further from the food production process and loses control over it as well as information about it.

In view of this kind of situations, the public opinion manifests its fears and concerns widely and in different ways. In words of the North American anthro-

pologist Sydney Mintz: “recent history and mass media prepare are preparing us for an environmental catastrophe. We are willing to discover impurity at every step, willing to be threatened by impurity at every moment”. Unawareness of the mentioned production procedures, of food transformation, makes consumers mistrust the industrial processes and the mediators who create, transform, pack, transport them, etc. And one of the most important consequences of it is the increasing attempt of consumers to recover control, to go back, even mentally, to those stages in which such procedure was more or less known, stages in which the industrial process was more under control, in which things were “pure”, “healthy”, “authentic”, and were hand-made, made with time... In a “traditional” way, in short. Much of our longing for what is pure –water, air, vegetables, fruits– looks back yearning for a past more and more on its way to extinction. A past that brings in *quality* and *naturalness* to an uncertain present. It is not strange, then, that publicity has decided to exploit these aspects broadly, offering “traditional”, “old style”, “home-made”, “grandmother’s” dishes, etc.

New strategies

This trend, this “search” by consumers of what is natural, hand-crafted, has not gone unnoticed by the different social actors involved in this process: public and private institutions, producers, industrialists, traders, publicists, editors, restaurateurs, tourism promoters... At the same time that users try to recover control over what they eat, from the other side of the commercial barrier, there has been an increasing attempt to provide the public in general with broader information about the offered product, information that takes us to “its origin” and that points out the *traditional* and *hand-crafted* elements of it. This

way, consumers are given what they are looking for, peace of mind, and at the same time this trend towards what is “traditional” and “natural” is reaffirmed.

But we can’t forget that, as every other aspect of cultures, nothing is static, everything is ductile and is in continuous re-elaboration, re-creation. Thus, also *tradition* is built, it is “created” and “re-created” every day. So, for example, a strategy that fast food chains have taken into account in order to guarantee themselves future customers has precisely been that of building customers’ loyalty since they are children, making them integrate fast food taste and smell as part of their past, of their personal food tradition. As the North American writer, Eric Schlosser points out in relation to fast food establishments in the US: “the flavors of food during childhood seem to leave a permanent mark, and adults usually go back to them without knowing why most of the time. This *soothing food* of childhood becomes a source of pleasure and calmness, a



fact which fast food chains strongly try to provide. Childhood memories of Happy Meal Menus result in frequent visits to McDonald's at adulthood, as the so-called *bulk users* do, that is, those customers who eat there four or five times a week.

The search for "traditional", "authentic" dishes, the appreciation of "family cooking", old cookbooks, orally-transmitted recipes, etc., take place, very particularly, in a social and historical moment in which the industrial transformation of food increasingly moves consumers of industrialized countries away from the control and knowledge of its production procedures. Going back to what is "traditional", to the old cooking "teachings", to things the origin of which is known –including the growth of the importance and of the search of "bio" products or for ecolog-

The consumer gets farther from the food production process and loses control over it and information about it

ical products–, to that whose transformation procedures are trusted, becomes then a value intimately linked to the cooking enjoyment as well as to nutrition in general terms.

Such an appreciation involves a social demand of this type of products, which has an effect on different social, cultural and economic environments, such as the case of individuals and families –especially those who can afford to place quality before price–, *gourmets* and gastronomic critics –and their mediatic influence–, the publicity and editorial fields, cooks and restaurateurs, touristic operators, etc. who, from their own professional spheres, have contributed and still contribute to this fact as well, inside a general social process which does not seem to be, at least in the near future, drawing to a close ■





ACRAC. Alternatives to Consumption: A space in Barcelona for reflection about consumption

Joan Almirall Arnal

ACRAC. Alternatives al consum.
Organització de consumidors i usuaris

ACRAC: Alternatives to Consumption appears as an organization of consumers which seeks to establish a connecting link between social movements and entities cooperating with the public administration. Its mission is to remind users that consumerism is the economic act that supports the current capitalist system and, at the same time, to achieve greater sensitivity towards objects and services, eliminating the predator consumption. To achieve these objectives, ACRAC proposes the association and massive mobilization of the different people who are the agents of the economic process through a debate forum that allows to break with the resignation regarding the abuses of market agents.

Keywords: ethical consumption, consumers association, economy, capitalism, predator consumption, consumption identity, economic process, debate forum.

ACRAC. Alternatives a la consummation : un espace a Barcelone pour la reflection sur la consummation

ACRAC. Alternatives à la consommation est née comme une organisation de personnes consommatrices dans le but d'établir un lien entre les mouvements sociaux et les entités collaboratrices de l'Administration Publique. Sa mission consiste à rappeler aux consommateurs que consommer est un acte économique qui soutient le système capitaliste actuel, tout en éliminant la consommation déprédatrice. Afin d'atteindre ces objectifs, ACRAC propose l'association et la mobilisation massive parmi les diverses personnes qui constituent les agents du processus économique à travers un forum de débat qui permet de rompre avec la résignation liée aux abus des agents du marché.

Mots clés : consommation éthique, association des consommateurs, économie, capitalisme, consommation prédatrice, identité de la consommation, processus économique, forum de débat.

ACRAC. Alternativas al consumo: un espacio en Barcelona para la reflexión sobre el consumo

ACRAC. Alternatives al consum nace como una organización de personas consumidoras que quiere tender un nexo de unión entre los movimientos sociales y las entidades colaboradoras de la Administración Pública. Su misión es recordar a los consumidores que consumir es el acto económico que sustenta el actual sistema capitalista y, al mismo tiempo, lograr una mayor sensibilidad hacia los objetos y servicios, eliminando el consumo depredador. Para lograr estos objetivos, ACRAC propone la asociación y movilización masiva de entre las distintas personas agentes del proceso económico a través de un foro de debate que permita romper con la resignación respecto a los abusos de los agentes del mercado.

Palabras clave: consumo ético, asociación de consumidores, economía, capitalismo, consumo depredador, identidad de consumo, proceso económico, foro de debate.

For some years now, we have heard about conscious and sustainable consumption. The deplorable state of environment puts us in a position where we need to ask ourselves if the industrial revolution is not taking us too far, and if nature can afford and sustain development in the taken direction. Similarly, depletion of natural resources and massive production force us to consider our actual needs. Associations of all kinds propose less aggressive patterns of behavior and consumption, which are often very uncomfortable. The companies include a new value to their business, corporate social responsibility, which is also an element of marketing and communication more and more appreciated and profitable: the fact that a company ensures a more ethical and ecological behavior means, more and more often, a revaluation of the trademarks. All of these issues, although absolutely necessary, offer us the possibility of freeing our consciousness, but at the same time, they evade a reflection on the true nature of consumption and its impact on human life.

An association of consumers and users, or as some administration bodies linked to consumption are trying to introduce: an association of people who consume, making it more human, aims at the protection of consumers

and consumer education. They are institutions of a civic nature which are very far from social movements, including the most radical environmentalists and critics of the economic and social system. Civic associations such as neighborhoods and consumer associations are partners of the respective government, since they are in charge of certain areas of public and social interest, such as consumer protection and education. This proximity to the government, which is embodied, in the case of consumption, in the involvement of the various councils of consumers which represent different associations and administrations, means places of exchange that often function as restriction spaces instead of as innovation spaces because the administration, whatever its political nature may be, has the tendency to maintain the status quo. The lack of contact between civic associations and social movements, more committed and combative, and usually at the opposite end to the public administrations, boosts the lack of innovation in the field of consumption and, in general, in social life.

The reality of current consumption

This is the general framework where the association of consumers ACRAC, Alternatives to Consumption estab-



lished, not with the aim, originally, of performing as a social initiative, but, with the legal cover and legal advantages that it obtained through it being a consumers' organization, it has the objective of trying to find a link between social movements and organizations that collaborate with the government. There is an increasing number of people in Catalonia with a well-defined personal opinion on these matters, and a good example of this is the increasing demand for organic products and the increased number of consumer cooperatives. Therefore, it is necessary to have an instrument capable of getting the real concerns of these people with a criteria of the Public Administrations, generally, very influenced by the commercial parameters of large enterprises, which are, in short, the ones in charge of labor and production in modern societies. Without ruling out this reality, ACRAC aims at reminding consumers that consumption is an economic act. In fact, it is the economic action which supports the current financial economic system. Capitalism has evolved since its introduction, especially since the Industrial Revolution. The latest metamorphosis of capitalism is that first world societies, and certain social groups of the third world, enjoy an uncontrolled trade and production activity, plunged into an uncontrolled spiral of insatiable consuming predation, the consumer society, where more and more spheres of human life are attracted to the field of consumption.

The first matter that deserves thorough attention is the fact that consumption is an economic act. The fact that we are mass consumers does not relieve us from understanding the significance of the individual act, because that makes us co-responsible for the economic and social situation that generates the system fed with each of our individual acts of consumption.

This also gives us an interesting opportunity of approaching the use that each of us makes of money. The nature of money is a very poorly studied matter, at least from the human perspective and dimension, obviously not from a scientific and economic point of view.

ACRAC aims to remind consumers that consumption is an economic act, in fact, it is the economic action which supports the current financial economic system

A critical look at the type of behavior and relationship with money shows three different levels of it: (a) the money that we use in our acts of consumption, characterized by the immediacy with which we give it away, and which is designed to meet our needs; (b) a second type of money, savings (practically unknown to many), through which we let other people carry out their projects, although in most cases, we ignore who is using our money and for what purpose, which gives way to a new banking reality, the so-called ethical banking, characterized precisely by keeping the saver informed of which companies are financing with his savings, (c) and a third type of money which, in many cases, involves an even greater sensitivity, the donation money, which we freely give without expecting anything in return, a donation entirely altruistic, but please note that certain types of investments by certain entities do not have this value, since the alleged donation is looking for other revenues. We have intentionally labeled as "predator" the type of consumption that we normally practice in our consumer society, since it seems to us that it is a very appropriate word because consumption, as it occurs today, is more animal and fierce than hu-

man really. Consuming in an insatiable way is the sign of a time when human beings believe they have reached very high levels of development because of the technology they have produced and implanted in their daily lives, however, all the technology that surrounds us does not hide the most animal side of our daily reality, which can be seen in our relationship with people, animals and things in general. The production and abundance that surround us have completely desensitized us in regards to things that are part of our lives. The old craftsman who produced a cup of tea thinking of the lips that were to support it has given way to mass production of plastic, disposable objects, which take thousands of years to decompose. A real consumer education would be the one which would enhance the sensitivity of people to all of the everyday objects that surround us, from the latest Ferrari model to the plastic cup of the water dispenser.

There are, on the other hand, very few articles published in scientific journals that explore the phenomenon of consumption beyond addiction, which is grouped among modern pathologies. No one has, however, undertaken the urgent task of investigating the harmful effects of consumption and advertising in children and adults, and it is quite evident that consumption is increasingly shaping our personality. Our identity is built upon what we consume: we are what we consume. At the same time, this reliance on consumerism, which is a reality changing at a very fast pace, necessarily generates tremendous anxiety and permanent dissatisfaction, which can lead to feelings of emptiness, so typical of our hyper-consumist and communicated societies. In a society of communication, people are becoming more and more isolated and lonely. The mobile phone, the Internet and phenomena

Our identity is
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consume

such as Facebook shows us an individual who is finding direct communication with other people increasingly difficult, as well as it is a proof of a clear deterioration of human relations. Modern philosophers and sociologists tell us about overmodernity, an era characterized by the loss of identity of the self, motivated by the disappearance of the former points of reference of our personality, such as profession, family, home, etc. Natural sources of culture are replaced by consumption, which stands as the center of modern culture. Consumption is an increasingly complex phenomenon, as it is the foundation of our economic system, and it is also the main cause of deterioration of human beings and their environment. And despite that, we are not provided with an anthropology of consumption, a meeting point for professionals from different areas, mainly from the fields of psychology and sociology.

Reaction

The detachment of consumers from economic reality in recent times, in which almost everything is known, begins to mobilize more and more people who show their dissatisfaction with certain procedures and actions of the Administrations and the large enterprises. An obvious case is genetic manipulation which affects more and more areas of food production, without us having the slightest knowledge of it. Genetic manipulation is introduced as one of the great steps forward in technology, further and further from nature, and our technicians present it as a big advantage, covering the absolute ignorance of the long-term effects, both on human health and in the environment.

The criterion of productivity is also imposed in the field of pharmacy, in which increasingly appear more products whose toxic effects are not known

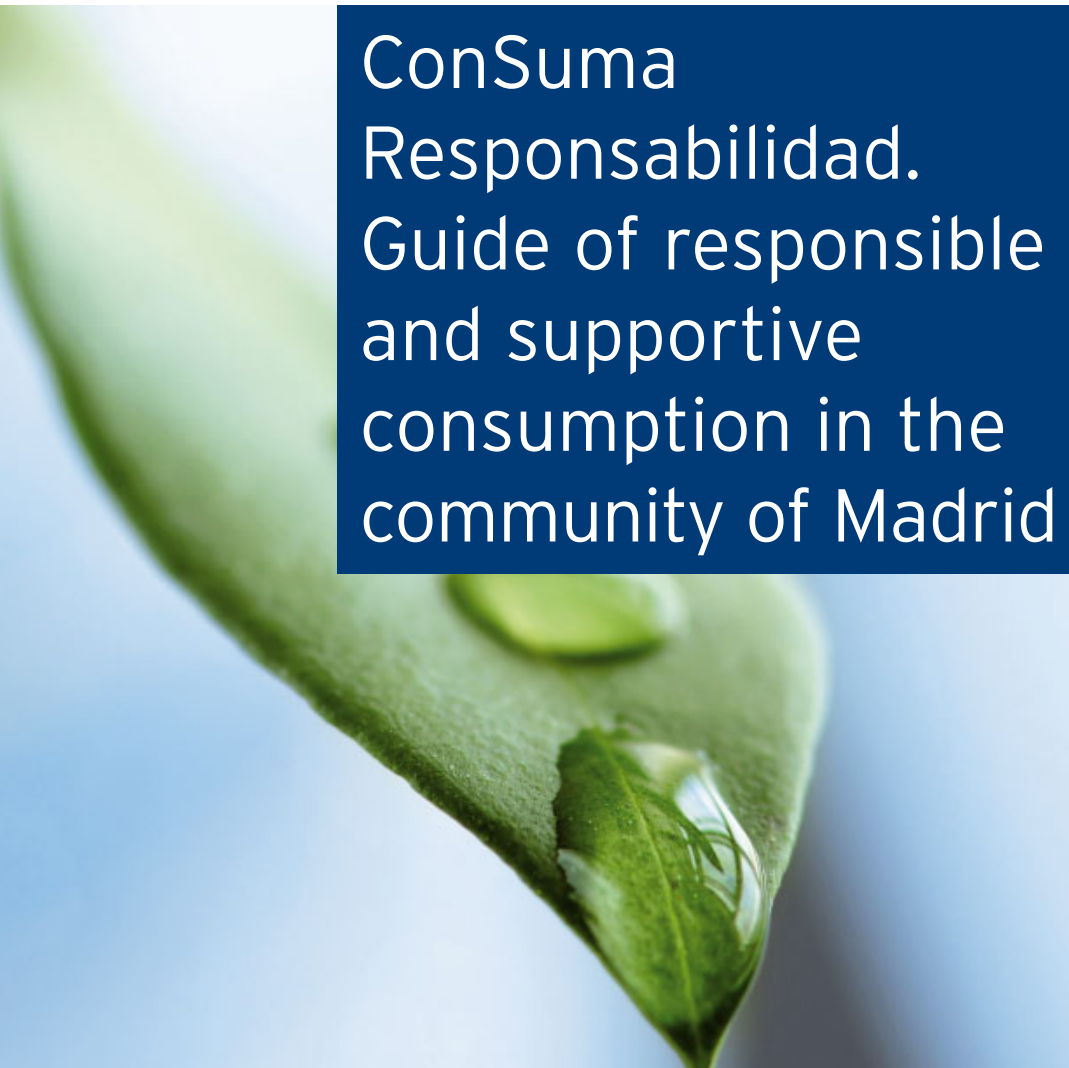
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until the product is being extensively marketed. This is the result of the insensitivity of a society that gives priority to productivity and competitiveness, and forgets that economy is really a human activity and not just numbers to be increased without limit. Associationism in economic life is a real alternative to economic competition. The association between the different agents of the economic process: producers, distributors and consumers, may be responding to the need to rationalize consumption, eliminating risk and over-production. In times of crisis caused by the globalization of markets and the concentration of capital in the hands of speculators, it is imperative to rethink economy and consumption and return to the real economy, but also to small producers. Large companies

play with consumers and their workers, it is not true that they generate wealth, and the crisis is good evidence of this. Jobs are as insecure as the products they market, the real origin and composition of which are ignored by consumers.

In conclusion, Acrac. seeks to create in Barcelona a debate forum to deal with all these issues, and it is an initiative of those consumers who are looking for new ideas and proposals. A forum that allows us to break with the resignation with which we look at the abuses of the uncontrolled market agents, since the truth is that these agents are dependent on us, on our individual economic activity. And taking advantage of the status of civic association, to be able to bridge the innovative proposals of social movements and public administrations ■





ConSuma Responsabilidad. Guide of responsible and supportive consumption in the community of Madrid

Adriana Ceceña
*ConSuma
Responsabilidad*

In 2004, a group of citizens from the community of Madrid (Spain) interested in achieving a more responsible and supportive consumption joined forces due to the difficulty of finding products and services which would correspond to the criteria of responsible consumption. Their reaction to this lack of information was the creation of a guide which included all companies and stores offering this type of products with the goal of facilitating their location and at the same time to disseminate the philosophy of responsible consumption. "As there is no guide of responsible consumption we will make it by ourselves".

This is how the project started, and today it includes a published guide and a web site, and on a regular basis organizes workshops, fairs and other events on topics related to supportive and responsible consumption.

Keywords: responsible consumption, supportive, sustainable, ethical, ecologic, fair, conscious, transformer.

ConSuma Responsabilidad. Guide de la consommation responsable et solidaire à la Communauté de Madrid

En 2004, un groupe d'habitants de la Communauté de Madrid (Espagne) intéressés par une consommation plus responsable et solidaire ont décidé de s'unir devant la difficulté de rencontrer des produits et services qui répondent aux critères de la consommation responsable. Leur réaction devant cette pénurie d'information était de confectionner un guide qui réunit toutes les entreprises et commerces qui offrent ce type de produits dans le but de faciliter leur localisation et, en même temps, d'étendre la philosophie de la consommation responsable à plus de personnes. « Comme il n'y avait aucun guide de consommation responsable, nous nous chargeons nous-mêmes d'en créer un ».

Ainsi a démarré le projet qui, outre la publication d'un guide, dispose actuellement d'un site web et participe continuellement dans des ateliers, foires et événements diverses en rapport avec la consommation responsable et solidaire.

Mots clés : consommation responsable, solidaire, durable, éthique, écologique, juste, consciente, transformatrice.

ConSuma Responsabilidad. Guía de consumo responsable y solidario en la Comunidad de Madrid

En el 2004, un grupo de habitantes de la Comunidad de Madrid interesados en ejercer un consumo más responsable y solidario decidieron unirse ante la dificultad de encontrar productos y servicios que respondieran a los criterios del consumo responsable. Su reacción ante esta carencia de información fue confectionar una guía que aglutinara las empresas y comercios que ofrecían este tipo de productos con el objetivo de facilitar su localización y al mismo tiempo difundir la filosofía del consumo responsable a más personas. « Como no existe una guía de consumo responsable, la haremos nosotros mismos ».

Así fue como arrancó el proyecto que hoy día, además de una guía publicada, cuenta con una página web y realiza de forma continuada participaciones en talleres, ferias y eventos de tipología diversa relacionados con el consumo responsable y solidario.

Palabras clave: consumo responsable, solidario, sostenible, ético, ecológico, justo, consciente, transformador.

What is ConSuma Responsabilidad?

At the present time, *ConSuma Responsabilidad* is a community (not an association, nor a cooperative or an NGO, but just a group) of people and entities which expresses concern for environment and social rights, which believes in transforming consumption into a tool available for all people to improve the current ecological, social and economic situation. It is important to mention that it is not a closed group. From its start it was thought to be a community open to everyone and any entity which would like to join a project. It started with a few people and now it counts on approximately 15 "permanent" participants and many people and entities have collaborated throughout the development of the whole project. The majority of collaborations are voluntary and all activities of the community are non-profit.

"ConSuma Responsabilidad. Guide for responsible and supportive consumption in the community of Madrid."

It is a guide, a kind of directory in which we can find a list of entities (communities, associations, companies, shops, etc.), that function in the framework of supportive economy and respect towards the environment and are situated (the majority) in the Community of Madrid.

The guide is divided into four big sections:

1. Information
2. Financing, investments and exchange
3. Companies which value people
4. Ecology

Apart from the entities' directory it describes the viewpoint of the community about what is responsible consumption and about the importance of spreading alternative ways of consumption that support sustainability.

The established criteria to choose entities are explained and introduc-



tions to each contained section are included as well.

It was a goal to prepare a guide that would be practical and helpful in finding places where we can exercise a more responsible consumption in Madrid. But also that it would be a more complete tool, which would be useful for those who are already familiar with the subject as well as those who meet the philosophy for the first time.

Beginning and development of the Project

The very starting idea of the project was not developed in an institution or a Department, but it emerged from the concern of some ordinary people who wanted to achieve more responsible consumption, but faced the obstacle of the lack of information about where one can find these products and services in our community of Madrid. As a consequence, we set up an objective to prepare a practical and useful guide useful in order to find products and services of responsible consumption in Madrid.

With this idea in mind we started to contact famous people and communities that would be interested in collaborating to prepare a guide.

We did not count on subsidies or support from institutions to pay those involved in the project, so all collaborations were (and still are) voluntary and outside work hours and daily activities of each individual person. The reactions were very positive and the working team, which was gradually created wrote the guide. This working team gathered regularly to decide the structure of the guide and organize the sections by making decisions by general consent and in the form of an assembly.

It was important for the appropriate development of the project and its continuity to count on a person who





was responsible for coordination and for work to be done in a suitable way. We relied as well on the collaboration of the social consultancy called *Trans-Formando*, which specializes in promoting social projects, like ConSuma Responsabilidad. *Trans-Formando* contributed with important technical and organization consultancy and with a place where the meetings took place.

Two years passed approximately between the starting of the project and the printing of the guide. Due to the character of the group and the way of working there was no date established to publish the guide. It was worked out at a pace adapted to each moment; slowly, but firmly.

The definite format and the structure of the guide were shaped during the whole process when good and bad decisions were taken and changes were introduced. There were long discussions related to sections to include or exclude, inclusion criteria, a format of questionnaires to be sent, etc. It was a long, but interesting and instructive process.



Publication and reception

Once the structure of the guide was defined and the stage of sending and receiving of questionnaires was advanced enough the moment came to think about how to publish data.

At the beginning, we thought of a small guide, of a length between 50-100 pages, but in the end when all entities (more than 400) and all theoretical-practical information were included, the guide had 286 pages. So it became a real book.

According to the ideology and the aim of the project, the choice of a publishing company had to fulfil the same criteria that other entities included into the guide followed. We contacted different publishing companies whose philosophy agreed with the one of responsible consumption and which we thought would be interested in the project. Finally, we decided to publish the guide with the publishing company called *Traficantes de Sueños* (which is not only the publishing company, but also a whole social project).



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The financing of printing also became an issue to discuss at this level, since until that moment there was practically no expense to cover. Once we received the printing budget we started to look for different options of ethical and supportive financing. Fortunately, we managed to achieve what we needed, but thanks to the success of guide sales the project was able to be self-financed, which turned out to be a great satisfaction.

This was a stage that taught us a lot about the process of publishing a book. From the ability to distribute the money: what should be paid for each book to an author, a publisher, a distributor, to the types of relationships between involved agents and different types of licenses (copyleft vs. copyright).

As in the case of the publishing company we searched for the printer which would keep the criteria of responsible consumption. The guide was printed on ecological paper and with ink which was less contaminant than other available ones, and even a soluble varnish was used for the coverage instead of a laminated one.

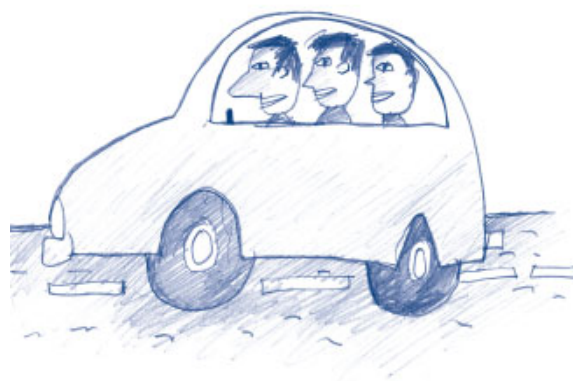
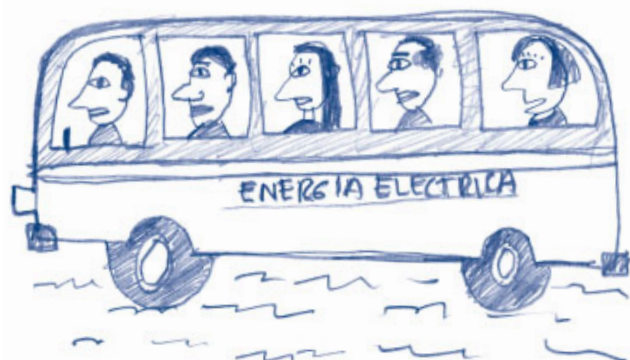
Since the objective was to disseminate information to as many people as possible, we decided to adopt a license called "creative commons". This is the license based on the "copyleft" (an opposition to the common "copyright)", which allows free circulation of the content of a book, meaning its copy, modification, use and distribution pro-

vided that the source of material is quoted. The guide will also be available in PDF format which can be uploaded via the Internet (www.consumaresponsabilidad.com).

The project emerged from the concern at ordinary people who wanted to achieve more responsible consumption, but faced the obstacle of lack of information

In November 2006 the first edition of the guide was released and one thousand copies were printed. The reception and success were excellent, so one month later there was a need to reprint another thousand copies, as the majority of books was already sold and there were some events to take place where high dissemination was foreseen. The publishing company was amazed at the success of the book and above all at the capacity of motivation of ConSuma Responsabilidad.

The success disseminating the guide was due to the effort and motivation of the community, basically due to their social networks. With the objective to present the guide to the people several presentations were held in cultural centers, schools, NGOs, fairs, shops of fair trade and ecologic products. We contacted as well with the media (radio, TV, press) to perform pre-



sentations and press notes, which were sent to a wide range of publications. No paid advertising campaign took place.

Perspectives

After a good start of the guide and the hustle and bustle of the promotion and first sales (two thousands copies sold), we had to sit and think what the next step would be. Was the goal achieved and everything was finished or was there something more to do?

What seemed to be the most logical thing in these times of Internet was to make information available through this means. We already had a web page where the guide in a PDF format could be found. But the idea which was discussed, and actually is already being

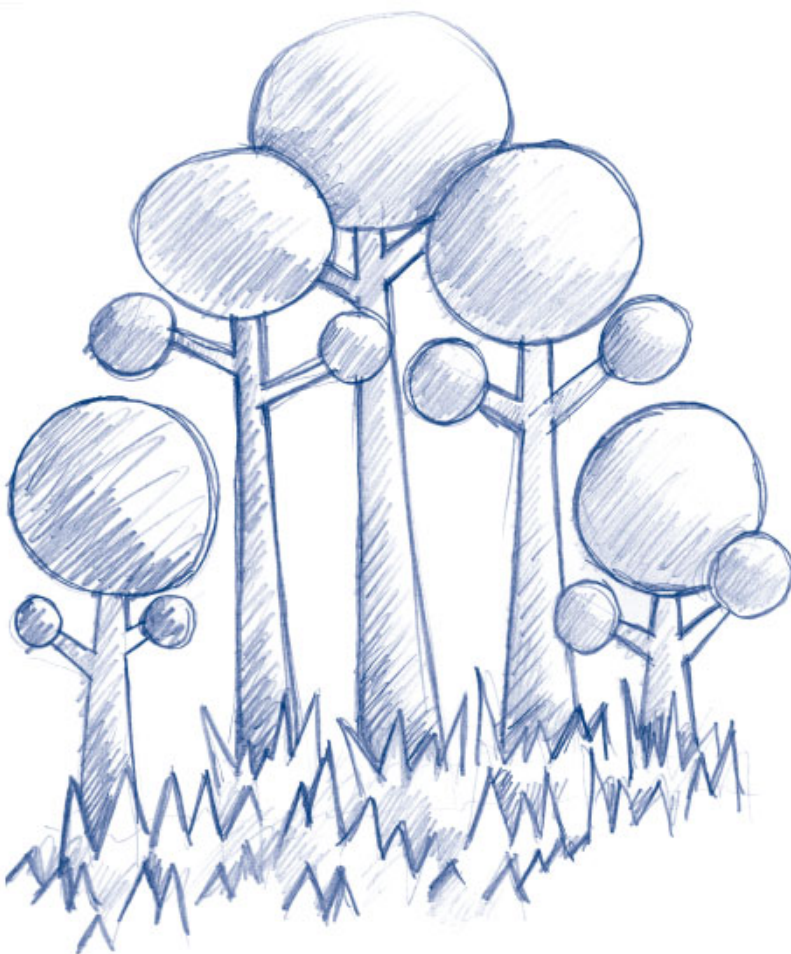
carried out, was to prepare a search engine on the basis of data of all entities included in the guide which would allow to have information updated and to facilitate access. This became the next goal to achieve.

While the data base for the web page was being prepared, we started to go through the guide. Not only in order to update the directory of entities, but also to improve it and in the future to edit another guide in paper format, probably with a new structure, new search options, new sections, etc. This is the area being developed at the moment.

Another new characteristic of the work is the participation in an initiative to organize different social movements in Madrid with the aim of offering an economic and social alternative which would be different to the current capitalist system, this way having a stronger impact on its change. Within this movement, ConSuma Responsabilidad had an initiative to promote the coordination of those communities involved in responsible consumption with the aim to join forces and to have a stronger impact related with this activity.

Conclusions

We would like to communicate that the civil society has a lot to achieve and it is possible to organize interesting and useful projects. Even though it is not a simple field, we can obtain positive results thanks to enthusiasm, care and organization. The most important part is eagerness to achieve changes and consciousness that acting according to some basic principles can contribute to change the course of the society towards sustainable consumption. Our experience was truly rewarding and we hope to be able to continue convincing more and more people to join the philosophy of supportive and responsible consumption ■





Citizens can build a sustainable world

Rubén Sánchez
García
Portavoz de FACUA

From the beginning FACUA has defended responsible behaviour in production and consumption. The Association understands that the aim is to reach a sustainable consumption pattern so as not to jeopardize future generations. To that effect education and consciousness-raising for a responsible consumption are essential and, on the other hand, a denunciation work to achieve production less harmful to the environment should be envisaged.

In order to implement a sustainable development, it is compulsory that society questions its own lifestyles, as well as the prevailing idea that the more you have and the more you consume, the happier you are and the better is your life quality.

The responsible consumer knows that the choice of products and services should be carried out not only on the basis of the products' quality and price, but also according to its environmental and social impact, and the behaviour of the companies which manufacture them.

Keywords: consumption, sustainable, responsible, product, environment.

Les citoyens peuvent construire un monde durable

Depuis sa création FACUA défend les habitudes responsables dans la production et la consommation. L'Association comprend que l'objectif consiste à atteindre une modalité de consommation durable pour éviter d'hypothéquer les générations à venir. Pour ce faire, l'éducation et la sensibilisation quant à la consommation responsable est nécessaire et, d'autre part, le travail de dénonce pour arriver à une production moins préjudiciable à l'environnement.

Afin d'arriver à un développement durable, il est nécessaire que la société remet en question son propre style de vie, ainsi que l'idée dominante qui prétend que le bonheur et la qualité de vie augmentent en fonction de nos possessions et de notre consommation.

Le consommateur responsable sait que l'élection des produits et services doit être faite non seulement en fonction de sa qualité et prix, mais aussi en fonction de son impact environnemental et social et du comportement des entreprises qui les fabriquent.

Mots clés : consommation, durable, responsable, produit, environnement.

Los ciudadanos pueden construir un mundo sostenible

FACUA propugna desde sus orígenes hábitos responsables en la producción y en el consumo. La Asociación entiende que el objetivo es alcanzar una modalidad de consumo sostenible para no hipotecar a las generaciones venideras. Para ello es necesario la educación y concienciación de un consumo responsable, y por otro lado, el trabajo de denuncia para conseguir producciones menos dañinas para el medio ambiente.

Para conseguir un desarrollo sostenible es necesario que la sociedad cuestione su propio estilo de vida así como la idea imperante de que tener más y consumir más conlleve aparejado una mayor felicidad y disfrutar de una mayor calidad de vida.

El consumidor responsable sabe que la elección de los productos y servicios tiene que hacerse no sólo en base a su calidad y precio, sino también por su impacto ambiental y social, y por la conducta de las empresas que los fabrican.

Palabras clave: consumo, sostenible, responsable, producto, medio ambiente.

The association understands that the objective is to put into force guidelines which would support sustainable consumption and would not be harmful for the future generations

The citizens have the basic tool of social change within their reach: their attitude towards consumption. Not only can voters throw their votes to the pooling box to choose their representatives, but also they have the opportunity as consumers and savers as well to base their decisions on criteria which corresponds to their beliefs and to promote the purchase, investments and construction of sustainable development.

FACUA-From its very beginning, Consumers in Action has advocated the responsible way of production and consumption. The twenty richest countries in the world have consumed more raw materials and non-renewable energy in the last century than the whole humanity throughout history and pre-history.

At the present time, incorrectly called developed countries (20% of the global population) exploit eighty per cent of the natural resources, running them out. The association understands that the objective is to put into force guidelines which would support sustainable consumption and would not be harmful for the future generations. To achieve this, it is necessary on the one hand to promote education and awareness of proper consumption, and on the other to develop environmental claims which would support a more sensible production to the environment.

When we speak of responsible consumption we need to focus on the

problem of massive consumption of the so-called "developed" society. These developed countries clearly consume too much and in addition to this, they do not have at their disposal the efficient and proper technology to guarantee an ecologic balance. This way of production and consumption and this generation which uses and throws away directly is coming to an end.

It is significant that the society reflects on its lifestyle namely a prevailing tendency to possess and consume more, which is believed to provide more happiness and better life quality. The promotion of consumerism through advertisements, TV and big shopping centers should be faced with an active attitude from consumers.

Ideals and standards of happiness which are being "sold" produce dangerous damage to the environment, like in the case of massive production triggered by the demand on the market which demands from more and more products and in consequence contributes to the consumption of more energy. Additionally, this situation is provoking health degradation due to the new food and social habits which are being imposed.

The responsible consumer knows that the choice of products and services shall be based not only on price and quality, but also on their influence on environment and society and on the attitude of producers.

Consumers should assume their responsibility of environmental degradation and resource exhaustion, because they consume what the industry produces. Their awareness of being responsible of this situation and their potential influence are essential to reach the goal of a sustainable world.

FACUA understands that reducing consumption should be seen as a principal goal. The association tries to raise consumers' awareness so that

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they purchase in a responsible way. To achieve sustainable consumption it is indispensable that the users demand clear and simple information, which is updated according to ecological and social connotations of products offered on the market.

Everyday, the simplest decisions show the way we care for our damaged nature, because the impact of all of these decisions that all people take is fundamental.

To make consumers aware and to achieve the responsible behaviour of producers, FACUA organizes campaigns to promote responsible consumption through the edition of publications, preparation of training workshops and recognition of measures from governments.

Within its actions of international cooperation, for many years FACUA has also propelled preparations of campaigns on sustainable consumption by organizations and consumers from Latin America and the Caribbean. It has also reported double standards of certain companies which act de-

pending on whether their activity develops in the first world or in the so called underdeveloped countries.

Responsible consumption can be summarized as an ecological, supportive and ethical consumption.

Ecologic consumption

Not only the famous "R" of reduce, reuse and recycle, but also such important elements like agriculture, ecologic cattle farming and handmade production are supported.

To recycle is to give new usefulness to components thrown away, transforming them into new products. Waste products are again introduced to a production cycle and then to a consumption process. In consequence, raw materials and energy are saved.

Responsible consumers should follow daily guidelines in order to avoid the waste and unnecessary expense, to reduce the consumption of products and raw materials, to reuse the products of daily use and to recycle the produced rubbish.





On this field, FACUA has always supported rational consumption which excludes consumerism.

Supportive and social consumption

Social consumption also includes fair trade which is based on decent payments for the work done. This is the type of trade which emerges from the new, free, direct, honest, and non-fraudulent relation between three new economic subjects: products in the process of impoverishment, supportive consumers and non-profit making intermediaries.

By these means, social alternatives and integration are fostered and a new economic international order is established.


To strengthen this kind of consumption it is vital to have supportive consumers who are willing to pay the overprice and to consume products

which arrive from those countries thanks to the so-called fair trade shops. The existence of this subject, namely the supportive consumer, is sufficient to make this new system of fair and distributive trade successful. This is why FACUA opts for promoting these new forms of trade and wealth distribution.

Green shopping

Consumers have the possibility to do green shopping, which is this kind of purchase which helps to preserve natural resources, saves energy and avoids wasting. This shopping requires getting to know how the product may affect the environment throughout its whole life. This includes materials used during the production, the way to use them, what we will do with it when we finish using them and anything which would facilitate an intelligent choice ■

Consumers
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shopping



Green homes: A citizen's response to the present energy and climate crisis

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Conde

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Cleaner energy
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BARNAMIL*

This article consists of a reflection on the specific work carried out by the environmental association *Barnamil* in the field of group learning aimed at achieving a new energy culture based on joint reflexion and action in the areas that are closest to us.

The article introduces the response which can be given from the specific framework of our homes in order to face up with the present energy and climate crisis situation. This is the framework in which the program called "Green Homes" was conceived. It is an initiative promoted, at the beginning of the year 2005, by the CENEAM (National Center of Environmental Education) and the County Council of Segovia and to which more than 800 homes from several regions gradually adhered to achieve the common goal of reducing domestic energy and water consumption, while at the same time creating and reinforcing new patterns of living that are more responsible and respectful to the environment.

Keywords: energy crisis, ecological crisis, domestic energy consumption, CO₂ equivalent emissions CO₂ climate footprint, Green Homes, participatory collective learning program, home energy management, collective challenges, responsible consumption of resources.

Foyers verts : une réponse des citoyens à la crise énergétique et climatique actuelle

Le présent article contient une réflexion sur le travail concret développé par l'association environnementale *Barnamil* dans le domaine de l'apprentissage collectif pour atteindre une nouvelle culture énergétique basée sur la réflexion et l'action commune dans les domaines qui nous sont plus proches. L'article introduit la réponse que l'on peut donner depuis le cadre concret de nos foyers pour affronter la situation de crise énergétique et écologique actuelle. Dans ce contexte est née le programme « Foyers Verts », une initiative promue au début de l'année 2005 par CENEAM (Centre National de l'Education Environnementale) et le Conseil de Segovia, à laquelle ont graduellement adhéré 800 foyers de différentes communautés autonomes dans le but commun de réduire la consommation de l'énergie et de l'eau dans les foyers, et en même temps de constituer et renforcer de nouvelles manières de vivre plus responsables et respectueuses de l'environnement.

Mots clés : crise énergétique, crise écologique, consommation énergétique domestique, empreinte climatique d'émissions équivalentes de CO₂, Foyers Verts, programme participatif d'apprentissage collectif, gestion énergétique au foyer, défis collectifs, consommation responsable des ressources.

Hogares verdes: una respuesta ciudadana a la crisis energética y climática actuales

En este artículo se hace una reflexión del trabajo concreto desarrollado por la asociación ambiental *Barnamil* en el aprendizaje colectivo hacia una nueva cultura energética basada en la reflexión y la acción conjunta a nuestros ámbitos más cercanos. Se introduce qué respuesta se puede articular desde el ámbito concreto de nuestros hogares para hacer frente a la situación de crisis energética y ecológica actuales. En este marco, surge el programa "Hogares Verdes", una iniciativa promovida a principios del año 2005 por el CENEAM (Centro Nacional de Educación Ambiental) y la Diputación de Segovia; a la que progresivamente se han adherido más de 800 hogares de diferentes comunidades autónomas con el objetivo común de reducir el consumo de energía y agua en el ámbito doméstico, a la vez que se van constituyendo y reforzando nuevas formas de vivir más responsables y respetuosas con el medio ambiente.

Palabras clave: crisis energética, crisis ecológica, consumo energético doméstico, huella climática de emisiones equivalentes de CO₂, Hogares Verdes, programa participativo de aprendizaje colectivo, gestión energética en el hogar, retos colectivos, consumo responsable de recursos.

initiatives for responsible consumption: social initiatives

Diagnosis of present energy situation at the global level and especially in the domestic sector

In our societies energy consumption is growing year after year (60% in Catalonia 1990-2005¹) and this energy consumption feeds mainly on fossil resources, the use of which is polluting. In 2005, 85.4% of primary energy sources used by the human kind were non-renewable. Out of these 85.4%, 79.2% correspond to carbon, petroleum and natural gas, and 6.2% to the uranium fission in nuclear power plants. In Catalonia, this dependence on fuel is greater and represents 95% of the overall² primary energy consumption.

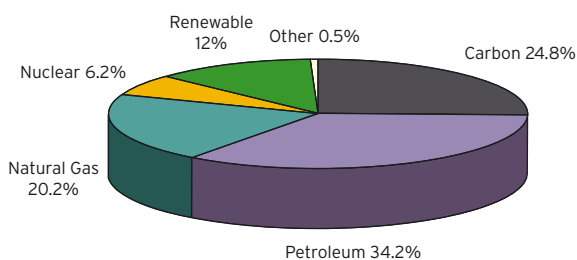
On the other hand, massive fossil fuel burning is producing an increase of

In our societies energy consumption is growing year after year

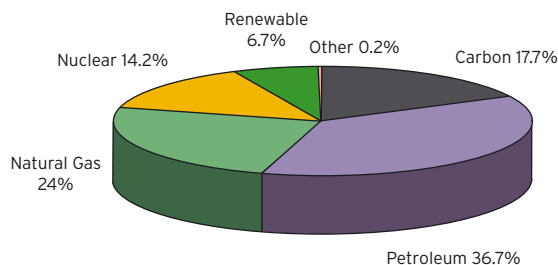
the greenhouse effect gases concentration on Earth atmosphere and, as per the unanimity of the scientific spheres of the world; this increase is the main cause of global warming and of the thermal disequilibrium of the Earth. One of the conclusions of the Fourth Assessment report of the Intergovernmental Panel on Climate Change (IPCC), drawn up by the United Nations during the last Convention on Climate Change held in Bali in December 2007, is exactly the following "Warming of the climate system is unequivocal and it is due to human activities with 90% certainty".

We should add to this global issue the huge inequalities in the world as to the exploitation of the energy resources necessary to economic and social development of many countries which do not own even the minimum

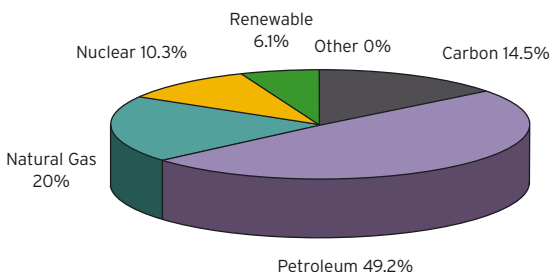
Primary energy consumption in the world, year 2005 (11,685 million of tep)



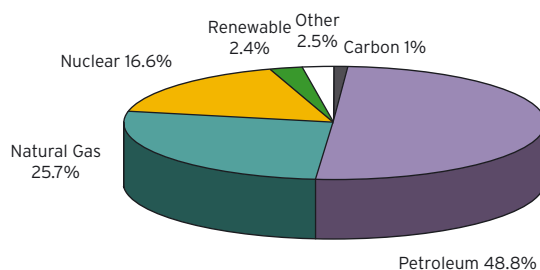
Primary energy consumption in Europe 27 Member States, year 2005 (1,811 million of tep)



Primary energy consumption in Spain, year 2005 (146 million of tep)



Primary energy consumption in Catalonia, year 2005 (27 million of tep)

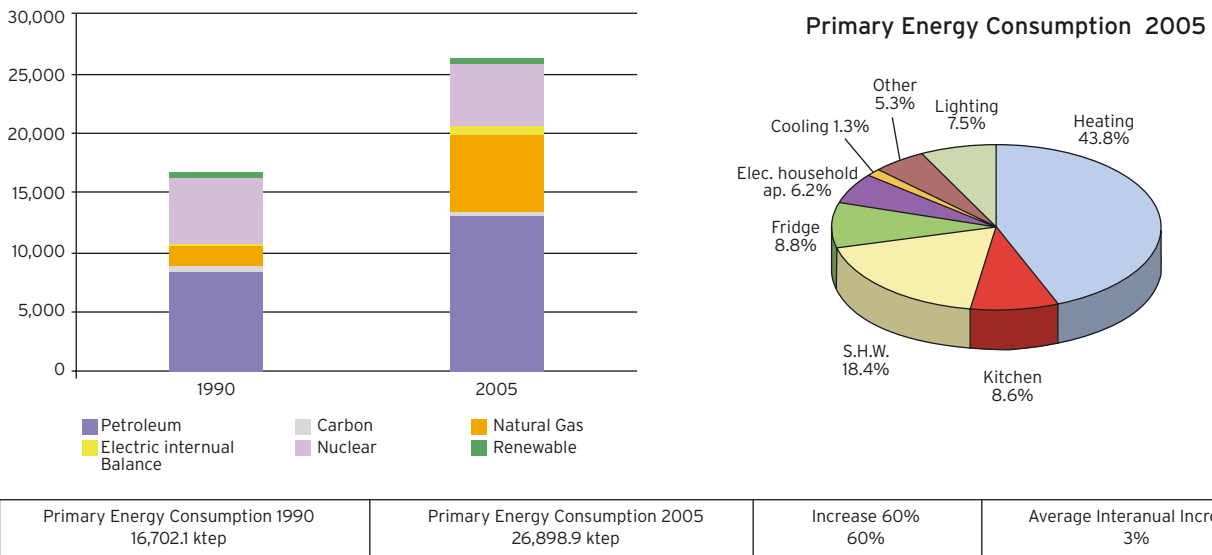


Source: International Energy Agency (OECD), EUROSTAT.

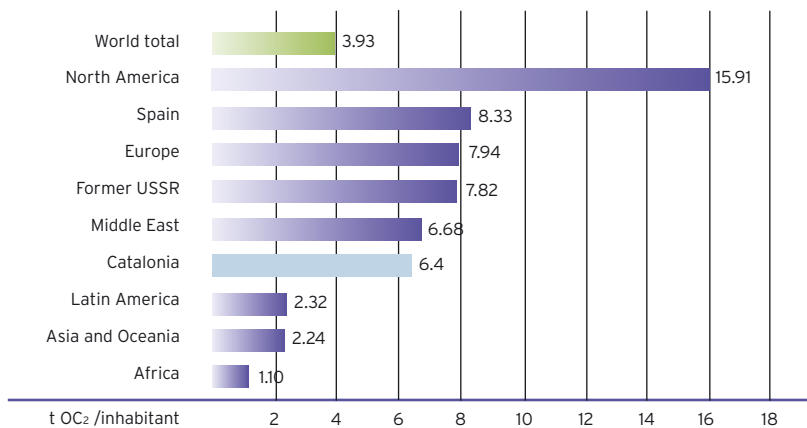
¹ Study Analysis of the Energy Metabolism of the Catalan Economy, CADS, Decembre 2007.

² Internation Energy Agency (OECD), EUROSTAT.

initiatives for responsible consumption: social initiatives



Source: Analysis of the Energy Metabolism of the Catalan Economy, CADS, December 2007.



Source: Pla energètic de Catalunya, 2006-2015.

energy requirements (heating, transportation, kitchen, etc.).

In this regard we should keep an eye on countries such as China and India, whose emerging economies are based on burning carbon as the main energy source, thus worsening the nowadays energy and climate crisis situation. The executive report *World Energy Outlook* of the year 2007 by the International Energy Agency, centered mainly on the forecast of growth of China and India, expects that the developing countries with the highest demographic and economic growth rate, will contribute with 74% to the in-

crease of global energy demand between the years 2005 and 2030. China and India alone will represent 45% of this increase. Moreover, more than four fifths of the increase in carbon consumption expected by 2030 will correspond to these countries which already cover 45% of world consumption.

The high dependence on finite fossil resources, accompanied by an infinite growth in world demand, takes us to an energy and climate crisis scenario with dire economic, social, political and environmental problems associated to it. This scenario is characterized by vulnerability at the time of

guaranteeing a quality energy supply, geopolitical conflicts related to dependence on fossil resources, higher prices, and impact on global economy, especially on final users with weak economies. On the other hand, we should not forget the increase of the negative effects of climate change such as desertification, extreme meteorological phenomena, propagation of infectious diseases, and increase of poverty and inequalities, as a final result of this double problem, energetic and climatic, with a clear predilection for Third World countries.

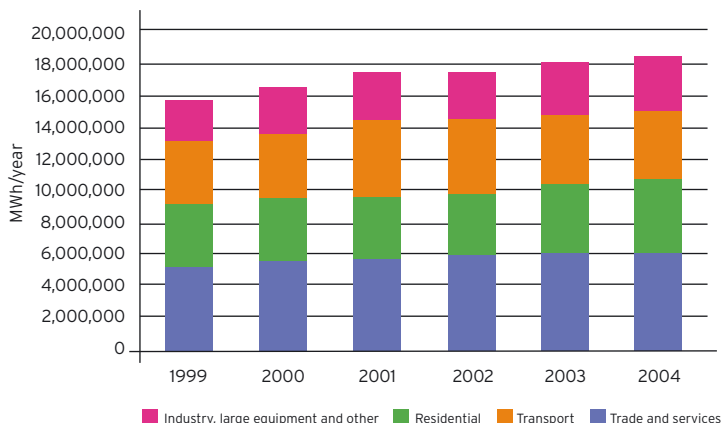
How much energy do we consume at our homes?

In this context, at our homes we consume an important amount of energy and water, specifically we are responsible for 30% of energy consumption (which is divided into 18% at home and 12% for the car) and 10% of the overall amount of water³ consumed in the

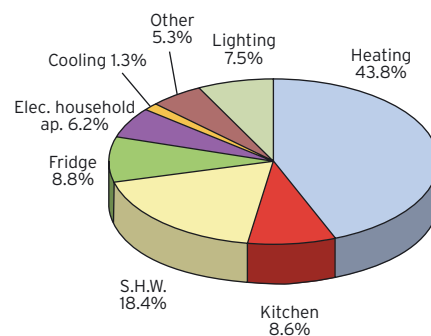
Spanish State. This constitutes a perfect scenario to stimulate behaviour changes which might help us make a more sustainable and solidary use of our resources. Since the nineties, in spite of the fact that the annual growth rate of population has been 4.5%, domestic energy consumption in the Spanish State grew at an annual rate of 2.5% mainly due to the increase in domestic equipment. On the other hand, a progressive increase in the number of cars was maintained and the number of registered cars exceeded 20 millions in 2005. In other words, there are more cars than main homes (14.5 million main homes, first dwellings in 2004).

In the case of Catalonia the final energy consumption of the residential sector represents 28% of the overall consumption in Catalonia, where 14.8% of the final energy consumption of the sector serves to cover the needs in transportation and 13.2% to cover the domestic needs of the sector⁴.

Evolution of final consumption by sector of consumption



Energy consumption of the domestic sector for the year 2003 according to uses



Source: Catalonia Energy Plan 2006-2015. Catalonia Government (2005).

³ "Practical Guide to Energy" IDAE, first edition 2004.

⁴ 100% Sustainable Catalonia, proposals for a Nuclear-free future. Eurosolar. Eurosolar, Greenpeace i Ecologistes en Acció, Juliol 2005.

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During the period 1999 to 2004 Barcelona's population grew by 5% approximately (from 1.500.000 to 1.580.000 inhabitants), whereas energy consumption in the domestic sector grew by 20% during the same period. It was the second sector after services with the highest annual increase (4.49%) during that period⁵.

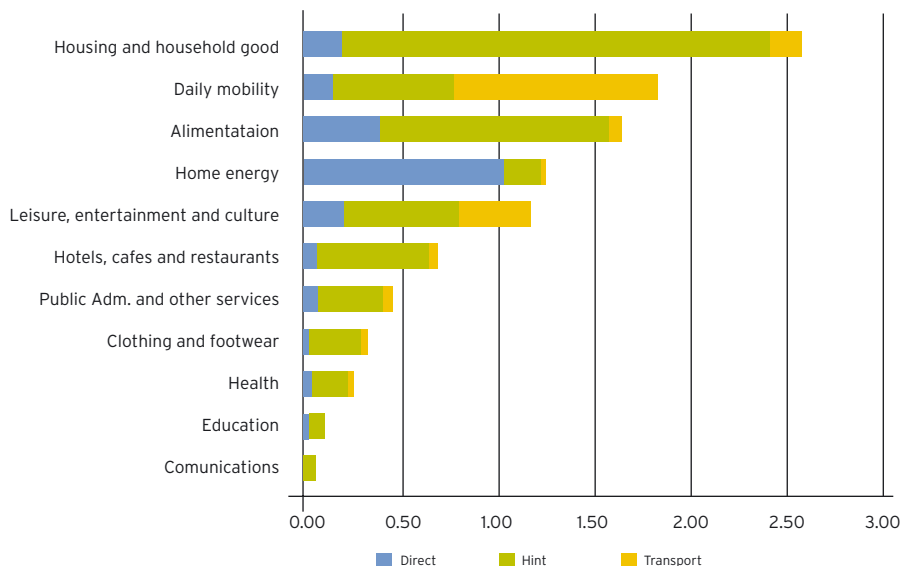
Before this scenario of growth of energy consumption in our homes, it is evident that there exists a great energy-saving potential derived from the basic needs in conditioning, lighting, hot water and electric devices. According to data from the ICAEN (Catalan Institute for Energy), an average Catalan home (with 4 residents and 90 square meters) can save 16% of the overall annual energy consumption with the introduction of more efficient technologies and up to 51% of the overall annual energy consumption if, in addition to that, we adopt respon-

sible practices and habits with regards to energy use.

It should be pointed out that, in all this section, we have not included energy consumption derived from our daily activities related to the consumption of goods and services, as well as of processing the waste derived from the consumption of materials. Yet, it is important to mention this, since those activities related to our food, leisure, communication, clothing, comfort, health, etc. leave a negative ecological⁶ footprint which worsens day by day.

In a study recently published by the Regional Activities Center for Cleaner Production -in charge of this journal- on greenhouse gas emissions associated with global economy in Spain, an approach was carried out to calculate the impact of all these daily activities mentioned before, translated into CO₂ equivalents.

CO₂ impact according to final consumption main categories, year 2000



Source: Greenhouse gas emissions from the perspective of consumption in a global economy, pilot experience in the Mediterranean, case study: Spain. CL/RAC, September 2008

⁵ *El comptador, informació energètica de Barcelona, núm. 2-2006. Barcelona Energy Agency.*

⁶ Ecological footprint: aggregate indicator defined as the area of territory ecologically productive (farming, pasture, forests or aquatic ecosystems) necessary to produce the resources used and to assimilate the waste produced by a population according to a specific way of life.

This graph shows how the consumption associated to dwellings and home goods constitute, by far, the most important component of the climatic impact during the period being analyzed. Daily mobility (with the exception of leisure, which includes an ever increasing number of plane trips) constitutes the second most outstanding area, wherein emissions associated with direct fuel consumption has been computed, as well as those associated with the whole life cycle of the manufacture of a vehicle and with the fuel, from its extraction to its marketing. Food constitutes a relevant area due to the emissions associated with production, distribution, and sale of food (with a huge of energy inputs necessary to machinery, pesticides, fungicides, delocalised packaging processes all over the territory, where the product crosses more and more kilometres...); hence the concept of petrofood given by some institutions of social-environmental scope. Finally, the energy consumed by the dwellings, as well as that associated to leisure, including travel and tourism, is also quite relevant.

Within all these activities which depend on energy consumption and leave a deep climatic impact, the pro-

gram "Energy and Water Green houses" focuses on energy consumptions derived from everyday mobility and includes, in this section, business, personal, and leisure airplane trips; and energy consumption of domestic activities. It should be pointed, however, that a year ago the CENEAM and the Center for Environmental Education of Polvoranca in Leganes started to implement the same Green houses program, incorporating energy consumption from family shopping basket, food, cleaning and persona hygiene products. The Barnamil association will start to work on these issues as of 2009.

Starting point of Green houses

The most recent sociological studies dealing with environmental issues (BBVA, 2007, BBVA, 2008, CIS, 2007) indicate that the level of information and consciousness of Spanish citizens as to the different environmental problems is increasing. However, this increasing consciousness does not seem to translate into a lesser pressure on basic resources such as water or the atmosphere. Environmental problems such as climate change seem to be a buzzword and reveal the worry of citizens' comments in daily life at schools, work, bars and institutions. However, in general, this does not translate in more responsible behaviour with regard to environment.

It is clear that one of the biggest challenges posed by the environmental issue consists of the creation of paths which will make possible and easier the jump from a greater awareness and concern for environmental issues to more a responsible behaviour from an environmental and sustainable point of view.

This is exactly the aim of "Green houses" which was born with the vocation to accompany the participating homes in the process of



change towards a more responsible management of natural domestic resources⁷.

“Green houses” arrived to Barcelona

As of march 2007, the Barnamil⁸ association launched the “Green houses” program in Barcelona as continuity for the “Neighbours for cleaner energy” project, which was being carried out since the beginning of 2006.

This program envisages collective learning through groups of 10 to 25 homes, who work toward enhancing energy and water management in their homes, through small changes to more efficient technologies and the adoption of responsible and thrifty habits.

Since March, work has been carried out with the following groups composed of cultural and sustainability training centers, neighbours’ associations, environmental and social associations, and ecological consumption stores.

Methodology and work of the “Green houses” program *Knowledge and action*

In order to be able to make headway towards a new energy culture at home and of the resource consumption in general, the program suggests to work and reflect collectively on the following thematic areas:

1. Energy crisis issue and climate change within the model of infinite growth in our societies, and the contribution from the domestic context.
2. Tools and alternatives on how to improve our work in a practical way, while saving and efficiently using energy and water resources in our homes.
3. Visualize and reflect on the benefits associated with the election of more environmentally responsible choices: in saving fossil energy resources, economic saving, healthier comfort, and reduction of environmental impacts (specifically CO₂ emissions).

Green houses Groups	Participating homes	Participating persons
Sustainable Barcelona Resource Center Group, 1	6	7
Mercasol Store Group	7	8
“Solidary consumption network” Group Sant Antoni	5	8
Sustainable Barcelona Resource Center Group, 2	10	11
Germinal el Farrò Ecological consumption Cooperative Group	14	18
Garcilaso Cívic Center Group	15	18
“El pou de la Figuera” Cultural Center Group	14	14
Fedelatina Latin American Association Group	15	16
Total	86	100

⁷ *Green Homes: An initiative to allow change in the domestic framework.* Francisco Heras Hernández, National Center for Environmental Education of the Environment Ministry.

⁸ Barnamil, a second order institution founded in 1999 by Depana, Ecologistas en Acció, APERCA, Trébol, CEPA and la FAVB to extend thermal solar energy in Barcelona. <http://www.energianeta.net/> i <http://energianeta.blogspot.com>.

Visualizing all of this in:

Energy saving	___kwh
Economic saving	___€
CO ₂ emission saving	___kg de CO ₂
Forest area to store emissions	___trees

This way we pursue the comprehension, elaboration, and integration of information to achieve a change in the attitudes in improving energy management and more responsible behaviour with regard to environment. As it pointed out by Francisco Heras in the methodological reference document of the “Green houses” program⁹, this is the way to change which we may call “central processing”.

Parallel to this procedure, the program provides participants with a “saving” kit (a low consumption light bulb, a faucet flow reducing device, and a thermometer to regulate heating and air-conditioning temperatures), aimed at less reflexive and more instantaneous changes. It pretended that, through the practical and immediate application of this kit, the participants would begin to incorporate saving behaviour and responsible natural resources consumption patterns in their everyday lives. In this particular case, and according to the abovementioned author, it is a matter of a more “peripheral” way of change, less reflexive and, a priori, complementary to the “central processing” method mentioned before.

Pose a collective challenge

Pose to each group of participating homes the following specific collective challenges.

- Reduce CO₂ emissions by 5.2% (Kyoto's Protocol aim);
- Reduce by 6 up to 10% domestic water consumption.

The aim pursued is to motivate participants, making an impact on the re-

sults which might be obtained through adding up the actions of each home, which translate directly in a reduction of domestic bills and a contribution in the improvement of the environment. This helps to overcome the sensation of the insignificance of the individual efforts related to environmental issued and allows the individual to feel that he is part of a joint effort.

Culture of Moderation and evaluation

The aim pursued is that, during the process, reliable data may be recorded on energy consumption (bills, meters) and on technological changes and habits, with a view to evaluate our attitudes and the evolution of domestic energy and water consumption. The evaluation instrument is also an instrument to introduce the culture of moderation which will enable the homes to recognize and evaluate their progress and worsening in sustainability issues.

Understand participation as a commitment

The idea is to transmit to the participants of “Green Houses” program the opportunity they have to guarantee a series of benefits, and at the same time require them and adhere to the bridge program in order to give a feeling of commitment to the rest of the homes of each group. The program offers:

- Three workshops of a practical character on the reasons for the reduction of energy consumption, the thermal and electric uses at home, and the sustainable mobility in our daily life.
- Obtaining materials related to the program: domestic energy saving team, documentation and practical information and program reminder.

The program allows participants to change the mood from a pessimistic vision to an attitude of confidence

⁹ *Green Homes: An initiative to allow change in the domestic framework.* Francisco Heras Hernández, National Center for Environmental Education of the Environment Ministry.

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Participants pledged themselves to:

- Fill in the initial questionnaire on the characteristics of the dwelling with regard to energy and water management and saving habits with regard to the consumption of these resources, and the mobility of the persons of that home.
- Fill in a final questionnaire on the same topics
- Provide data on domestic water and energy consumption through bills.

Incentives of the program

Besides the opportunity to participate in a collective process with important energy and CO₂ emissions savings, this participatory and mutual learning process offers other added values:

It allows the participants to understand and incorporate the relationship between environmental and social problems and our personal consumption modes. It allows them to change the mood from a pessimistic and impotent vision so frequent towards this type of global problems to an attitude of confidence in which one believes that it is possible to implement actions which allows us to make progress in resolving such problems through personal and collective commitment. As the authors of the methodological concepts of Green houses have pointed out, the participatory work of this type of programs allows integrating learning and action, crossing the barrier which often separates what we learn from that we do, and which always makes that learning activities seem as falling outside the scope of the real world.¹⁰

It allows creating a link between the participating homes, with the possibility to continue working launched in this area or in any other area. It al-



lows us to know one another and share knowledge, making the process richer.

It allows consolidating, in a collective way, a new energy culture with the possibility to extend it to our areas of influence (work, training centers, associations...). Moreover, the fact that we incorporate this new way to manage energy in our homes allows us to position themselves with regard to the public authorities and the rest of society when the time comes to demand responsible policies and actions vis-à-vis the use of such resources.

Understand the participation as a gratifying experience, with a collective commitment great results can be achieved and the participants can act as the protagonists of the process.

¹⁰ *Green Homes: An initiative to allow change in the domestic framework.* Francisco Heras Hernández, National Center for Environmental Education of the Environment Ministry.

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Results of the "Green Houses" experience

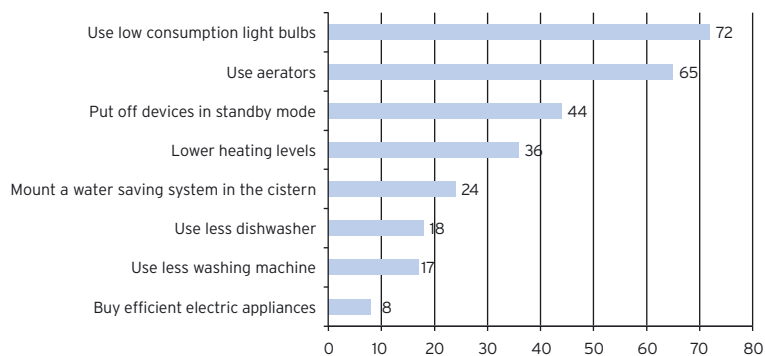
Green houses Program 2007 in CENEAM, in the Segovia County in the year 2007¹¹. In that year, 232 homes belonging to a dozen municipalities and communities of the Segovia County participated in the program. The aims set out for the participants in the program were:

- Achieve a saving of 5 to 10%
- Achieve a reduction of CO₂ emissions associated with energy consumption of 5.2% (average rate of the reduction envisaged in the Kyoto Protocol)

As per the calculations and estimates carried out by the Green Homes team of the CCENEAM, the results were the following:

- A global water saving of 14.5% (above the objectives set)
- A global CO₂ domestic emissions reduction of 6.14% in the case of homes equipped with gasoil heating¹².

Green homes 2007. Changes introduced by the participants to save water and energy

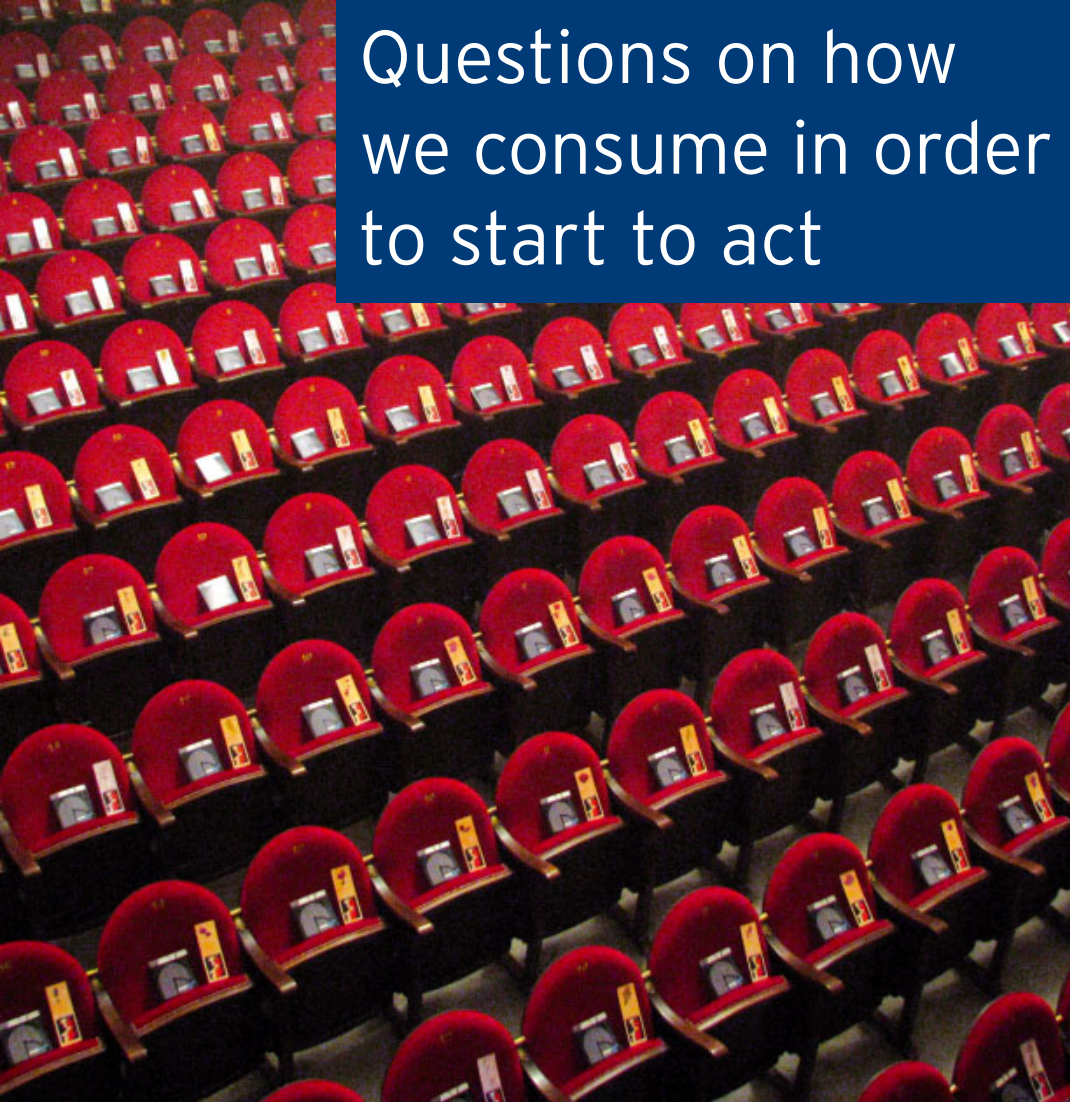


Photographs of Green Homes Programs, Barcelona

Presentation of Green Homes by Barnamil at the Sustainable Barcelona Resource Center, Septembre 2008.
 Thermal Workshop (Insulating, heating and hot water) of the Group Green Homes at the Sagrera area, Barcelona. October 2008.

¹¹ Green houses program was organized in Segovia by the National Center for Environmental Education (Ministry of Environment) and the Segovia County Council, with the collaboration of interested municipalities and communities.

¹² Green houses 2007 in Segovia. Report on the results of September 2008. National Center for Environment Education and Segovia Country Council.



Questions on how we consume in order to start to act

Álvaro Porro
CRIC, Center of the
Research and
Information about
Consumption

The CRIC is the small, independent non-profit association which is based on the work of its members and on the collaboration of the people who adopt its ideas. They offer talks and workshops related to the consumption, they have also published books about consumption and they collaborate with the media and social movements. Their main instrument is the magazine *Options*, which in every issue dedicates its pages mainly to the process of production and consuming options of some specific product.

Recently, the CRIC has started to explore a new way of communication to promote the sustainable consumption: a theatre. The representation *Don't consume you!* is the humorous reflection of our way of life.

Keywords: theatre, Options, magazine, responsible consumption audiovisuals, formation

Mettre en question le modèle de consommation pour passer à l'action

Le CRIC est une petite association indépendante à but non lucratif, qui dépend du seul travail de ses membres et de la collaboration des personnes affines à la proposition. Cette association organise des causeries et des ateliers en rapport avec la consommation, elle a édité un livre sur la consommation responsable et collabore avec les moyens de communication et les mouvements sociaux. Son outil principal est la revue *Opcions*, laquelle réserve sa plus grande partie de chaque numéro au procédé de la production et aux options de la consommation d'un produit concret.

Récemment le CRIC a commencé à explorer une nouvelle voie de communication pour promouvoir la consommation durable : le théâtre. La représentation « No te consumas! » est une réflexion humoristique sur notre manière de vivre.

Mots clés : théâtre, *Opcions*, revue, consommation responsable, audio-visuels, formation.

Questionarnos la manera de consumir para pasar a la acción

El CRIC es una asociación pequeña, independiente y sin ánimo de lucro, que se basa en el trabajo de sus miembros y la colaboración de personas afines a la propuesta. Ofrecen charlas y talleres relacionados con el consumo, han editado libros sobre consumo responsable y colaboran con medios de comunicación y movimientos sociales. Su principal herramienta es la revista *Opcions*, que dedica el grueso central de cada número al proceso productivo y opciones de consumo de un producto concreto.

Recientemente, el CRIC ha empezado a explorar una nueva vía de comunicación para promover el consumo sostenible: el teatro. La representación *¡No te consumas!* es una reflexión humorística sobre nuestra manera de vivir.

Palabras clave: teatro, *Opcions*, revista, consumo responsable, audiovisuales, formación.

We must ask ourselves about how we consume in order to start to act

We, in CRIC are the small entity appeared as the result of the impulse received by the people who understood the connection between our consumption and many problems, both collec-

“Is my point of view on the nature connected to my consumption pattern?”

tive (ecological and social) and personal, that we are dealing with. We wanted to start taking decisions on how to consume in a different manner and found that, in order to do this, we have to answer a lot of questions. What material is the product we are going to consume made of? When and how was it produced? What kind of company will get my money for this brand? Has my consumption pattern something to do with my social environment? Is my point of view on the nature connected to my consumption pattern?

The problem that we faced, as well as many other people, was that in many occasions the needed information in order to answer these questions was not available. So, we decided to start preparing it on our own. And, following this line, once passed the stage of learning, we created the magazine “Options”, the only magazine in Spain specialized in the problem of responsible consumption.

Responsible consumption is a subject of the growing interest today and each time it is more and more heard among the people. Although this result is stimulating, it is also complicated, because, depending on the way it is approached, it can generate somewhat simplistic and frivolous dynamics which conduct not to real changes, but

more likely to the creation of the new, sometimes elite, markets. Nevertheless, just as we understand it and according to our own experience, redefining our consumption pattern can help us discover through practice different life options and create our own idea of a “good life” beyond the one that we get from the culture of the consumerism. And it can help us transform our societies and build “other possible worlds” as well as include us in those movements that fight for this transformation.

During this time, we have realized how important it is to reflect on how we want to present our messages. Sometimes we find speeches which, instead of encouraging people to be aware and to act, generate a complex of guilt that torments and blocks, or others which focus on some disastrous vision of our near future and which, therefore, do not look attractive for the majority of the population. We seek that our acts, besides being respectful with the environment, bring also satisfaction to us.

Our work is to create tools of information in order to start to act. Therefore we think a lot on how we want to communicate our message. In the past years, as we will further explain, have tried to create different channels of communication. We put special emphasis on presenting the magazine, because this field gives us the best repercussion and also because it is better explored, and also in our theatrical project, because it is our last experimental field.

What is the CRIC?

The CRIC (abbreviation in Catalan for the Center of the Research and Information on Consumption) is the small independent non-profit association which is based on the work of its members and on the collaboration of the people who take close its

ideas. We have been increasing gradually the number of persons who know us as well as the number of persons who work or collaborate with the project.

We offer chats and workshops related to the consumption, we have published some books with the publishing house Icaria ("Guide for the responsible consumption for toys", "I eat and you keep silent... or not", etc.) and we collaborate with mass media and social movements, but basically our main tool is the magazine Options.

The magazine Options

In January of 2002 the first number of Options, the magazine containing practical information for conscious and transforming consumption published (in Catalan and Spanish) in Spain was published. Every three months, in each new issue, we revise the consumption of one specific product or service. As of today, 28 numbers of the magazine were published, and among other themes, we revised the consumption of products such as bread, meat, beer, tourism, light bulbs, water, banks, etc.



In a practical way, the central report helps us know certain products in different dimensions. First we try to understand its real function, this helps us understand what our need is and how the product can satisfy it. Later we investigate the different forms of production and the social and ecological problems it generates, and we try to get to know the alternatives. Finally we seek the way to improve our way of using this product (to use the resources in the best way possible, to do something so that the product last more, etc.). Also we revise the options (brands and companies) that are in the market, from the most popular and best-known to others not so well - known but which apply the different form of "doing things".

The remainder of the magazine is comprised of shorter sections in which we reflect or analyze the different aspects of our world related to the consumption (in sections as "whys" or "trips") and in which we also discover the practical options of how to transform our consumption and our day by day life (in "ideas" or "tools").

Educational activities

Another field that we have explored in the past years is that of the talks and the workshops. It turns out to be interesting to show "live", in front of the public, the reflections and investigations we develop in the magazine. We have worked in different environments: educational, third age, associations and groups, activists, scientists... and from each one we have learned as well as enriched our vision of responsible consumption and of our way to communicate about it. If we had to summarize what we learned, we would say that it is extremely important, when speaking about responsible consumption, to take advantage of its practical and positive potential, articulating what we want to say from the positions of the common experiences

and anxieties and inciting the public to participate. Everyone consumes, therefore everyone has his/her own experiences on the matter and also everyone can do something that is the power of conscious consumption.

Audiovisuals

Our first audiovisual has appeared spontaneously as the result of many elements: researching work for our magazine, personal trips and solidarity and protest campaigns in which we participated. It has been something very new and interesting for us and we are content with the results we achieved. It is a simple document of 26 minutes, and the main language is Spanish but also Guarani and Catalan were used in it, and the subtitles appear in English.

"Three Stories, a Glass of Milk"

Focus on the daily cause of the environmental problems: the agricultural and animal husbandry models and the type of consumption of feedstuffs that they generate. We made various trips to get to know stories that can stand behind, for example, a glass of milk. Stories that will be told by their main characters: Jorge (a Paraguayan farmer), Modesto and Pilar (the Cantabrian cattle dealers); Alex (a consumer from Barcelona), Alí (a Colombian farmer)... In the last block, the alternatives will take their word. Direct and without filigrees, this video represents an integrating perspective of the environment, where the social and environmental problems are closely interlinked.

To download all: <http://www.ecologistaenaccion.org/spip.php?article10232>

For more information: <http://www.opcions.org/documental2.html>

Everyone can do something that is the power of the conscious consumption

A Theatre

The use of theatrical language has represented a very rich experience for the CRIC which has enabled us to transcend many of our ways of communicating our message to the people. This time we wanted to work on an issue of vital importance in the transition towards more sustainable patterns of life; that means our relationship with time. The lack of time that we feel living in the most untenable societies can be the paradoxical result of having to live our everyday life in a technology-filled environment which on the surface saves us



time. However, when we attempt to undertake changes towards a more sustainable consumption, the factor of time management also becomes an

obstacle. All these paradoxical elements are those we face in this theatre production entitled "Do not consume".

Do not consume!


Tic, tac, tic tac... For about a bit less than an hour and a fifteen minutes, Nuria, Manel and Lucia tell us about their everyday life. There are three different ways to act, to eat, to buy, to love and be loved, to sleep and to wake up. And that is where it all starts; with the awakening, the truce (always cut short) that our tictac grants us during the night comes to an abrupt end in the morning. It can be a tititititititititi or trrrrrrrrrrr or pi pi pi pi pi... but the message is unambiguous, we must get back to the front line, we must return to our tic tac. But is it really "our"? To what extent is it "our"? Have you ever had a feeling that, instead of being the main actor, you're the steward or the assistant in your own life? The pace life sets for us, our way of living the day can be very remotely "ours".

This new setting of the Xucrut Teatre wants to go through our every day's heats with a smile or even with an accomplice laugh, although it does not miss the opportunity to hold breath and feel that sour taste of anxiety our tic tac leaves us.

And it's a fact that the ways we eat, sleep, interact... are the accurate reflections of our tic tac. Manel the messenger seems to eat in the same manner in which he sorts out cars at every traffic light. Nuria, the work addict, needs the pendulum of zapping for her night hypnosis, a talk with her partner is too demanding when she, finally, gets home. Lucia, the other extreme, goes on with her life without a rush but also follows her tic tac and her troubled conscience does not give her a breath (it will follow her through the aisles of the supermarket). And one of the most interesting reflections of the pace of our lives is how we consume. That is why *Do not consume!* appeared.

"Do not consume!" is a self produced setting of the group Xucrut. The three actors were formed in the school of Lecoq, although they live what they present every day. The umbrella was provided by the CRIC in search of new foci and channels to reflect consumption and possible changes. Six months of investigation, creation and play, and the script finally appears, and all this together gives a consistent result. It is a simple setting without big intellectual aspirations but, in a plain and comical way, it creates the sense of complicity among the audience.

For more information: www.opcions.org/teatre.html ■



Day Without Shopping, a bet for a different consumption pattern

Luis Azorín Vera
Comision of the
Consumption Madrid
of the Ecologists in
Action

On November, 28 of 2008 different cities of 65 countries of the world celebrated the 17th Anniversary of the DWS. The DWS has evolved since its first celebration in Vancouver in 1992 and now it is a day celebrated at a worldwide level by the groups which are critical about the mainstream pattern and values of our society of consumption to demonstrate their opposition, to warn about the consequences and to offer other alternatives of responsible consumption. In Spain, Ecologists in Action organize this day of defense, preparing various activities all over the national territory.

Keywords: Day Without Shopping, alternatives for consumption, vindicating social act.

La Journée Sans Achats, un pari sur un modèle de consommation différent

La 17^e JSA 2008 a été organisée le 28 novembre 2008 dans diverses villes de 65 pays. Le DSC a évolué depuis sa première édition en 1992 à Vancouver et est devenu un fait marquant à niveau mondial pour les collectifs détracteurs du modèle et des valeurs de consommation qui règnent dans notre société en vue de montrer leur opposition, dénoncer les conséquences et proposer d'autres alternatives de consommation durable. Dans l'État espagnol, Ecologistas en Acción organise ce jour de revendication, à travers l'organisation d'activités dans tout le territoire espagnol.

Mots clés : Journée Sans Achat, alternatives de consommation, acte social de revendication.

El Día Sin Compras, una apuesta por otro modelo de consumo

El 28 de noviembre de 2008 se celebró el 17^o DSC 2008, en distintas ciudades de 65 países. El DSC ha evolucionado desde su primera edición en 1992 en Vancouver, hasta convertirse en una fecha señalada a nivel mundial para los colectivos críticos con el modelo y los valores consumistas imperantes en nuestra sociedad, para mostrar su oposición, denunciar sus consecuencias y proponer otras alternativas de consumo sostenible. En el Estado Español, Ecologistas en Acción viene organizando este día reivindicativo, organizando actividades en todo el territorio nacional.

Palabras clave: Día sin compras, alternativas de consumo, acto social reivindicativo.

What does a Day Without Shopping mean?

The DWS is celebrated immediately after the commemoration of Thanksgiving day. The choice of the date is due to the fact that Thanksgiving Day presents the starting shot for the Christmas shopping wave, mainly in the United States. The idea of the DWS was proposed by Canadian publicist Ted Dave as a countermeasure against excessive shopping and was celebrated under the slogan "Enough is sufficient" in September of 1992. Later on, the idea got an impulse from the magazine "Adbuster" and, since 1997; the celebration was adjourned for the week following Thanksgiving Day.

What the DWS proposes is something similar to one-day consumers' strike or a boycotting campaign directed not against a product or a company, but against the Society of consumption in general. The society, characterised by wastefulness, lack of solidarity, homogenization, individualism and the unbearable environmental and social burden.

There are numerous data which confirm this unbearable environmental and social burden: for example, 12% of the people who live in the economically highly developed North are responsible for 60% of the total consumption on our planet, while the volume of consumption of those who live in South-Eastern Asia or in Sub Saharan Africa does not exceed 3,2% of the total. Bearing this in mind, we should point out that if such a consumption pattern became global, we would need 3 planets like our Earth to satisfy the demand¹. But, as if it was not enough and in spite of the achieved levels of consumption and production, we are the culture which has shown clear and numerous signs of surfeit and unhappiness.

The big retailing stores are especially representative examples of



12% of the people who live in the economically highly-developed North are responsible for 60% of the total consumption on our planet

this consumption pattern. They have scrupulously analyzed the most insignificant details which can increase the sales. As Javier Garces, the psychologist expert in consumption pointed out², in these places the consumer acquires about 20% more of the products he was going to buy. Besides, the dependence on the car to get to the shopping mall, the negative change of the city pattern, the excessive usage of packaging materials, the concentration of the bargain power, the destruction of the cap of the small businesses and the low number of working places needed to run such a center in relation to the sale volume it generates are some of the elements which are the proof of the unbearable environmental and social burden of the big retailing stores.

On the DWS, the people are invited not only to reduce their level of consumption; it is also the day of reflection and criticism of consumption values, as well as the day for proposal of alternatives. Following this direction, the social movement groups which work on these themes take advantage

¹ 'Informe sobre el estado del mundo' del Instituto Worldwatch. 2004.

² <http://www.psicosociales.com>



Critics of the consumption using its own symbols

of this week to denounce, in this or that manner, the unjust, alien and unsustainable system, and to defend fair and ecologic consumption of the necessary products at the local level. In this manner, the DWS is also the occasion for collective reflection about our consumption patterns and for the promotion of responsible consumption during 364 days a year.

The repercussion of the DWS was gradually growing since its first celebration in 1992. This year it was celebrated in numerous cities in sixty five countries.

In Spain, the main promoter of the DWS is the group Ecologists In Action, although there are also many other groups which participate in the organization of actions and activities in the cities all over Spain, trying to spread the critics of the actual pat-

tern and showing the existing alternatives.

A DWS 2008, one Day Without Shopping, 364 of the sustainable consumption

Ecologists in Action propose to discuss, reflect, and elaborate possible alternatives in order to remodel the life style, the production/ consumption/transportation patterns, and to redirect the efforts to pass to the sustainable system. It is also taken for granted that the decrease in the consumption of energy and raw materials, as well as in the generating of waste is not an option but a vital need imposed by a planet with limited resources: the infinite growth is impossible in a universe with finite resources.

To make the first step on this direction, we must reconsider our values, placing cooperation before competition, solidarity before individualism. We must adapt the economic and production structures to the shift in values, to support production and consumption mainly at the local level, redistribute basing on criteria of ecology and equality access to the natural resources and wealth; to go after long-lasting products that can be recycled, repaired and conserved, and to apply the principle of recycling to all our activities.

On November 28, 2008 the last edition of the DWS took place. In Spain, it was held under the slogan "one Day



initiatives for responsible consumption: social initiatives

Without Shopping, 364 days of sustainable consumption", as an active bet for the different consumption model, more responsible and with the axis directed not to the economic growth and the optimization of the corporate profits at the account of the systematic social unjustness, the polarization of wealth, the dependence on the consumption and the destruction of the natural resources.

During this week, different activities in more than fifteen cities were organised. Among others, the Days of anti-consumerism cinema, analysis of alternative projects of responsible and sustainable consumption, demonstration of useful tricks, exhibitions of counter publicity, talks of responsible farmers, tailor workshops, furniture recycling workshops, roundtables.

There is one visit that stood out among these activities as the example of the philosophy proposed by Ecologists in Action to make people acquainted with other alternatives, distinct to the current model of consumption. It was a guided tour to the residential area Lavapiés in Madrid, during which Ecologists in Action presented different options for critical and sustainable consumption. The following stops were singled out in the itinerary of this tour, where the social and environmental advantages of these options were explained:

- The local market, as an example of the small family business for the residents of the neighbourhood, of the vicinity, every day more threatened by the expansion of the big retail stores.

- La Ceiba³: the cooperative of the consumers for the fair trade North - South and North - North, where it is guaranteed that the offered products were produced with respect to the social and environmental norms and that the salaries paid to the workers are fair.



Diffusion poster of the DWS 2008

- La Escalera Karacola⁴: The cooperative of the consumers of the feedstuffs coming from ecologically pure agriculture and animal husbandry.

- Bajo el Asfalto está la Huerta (BAH) (There is A Garden Under the Asphalt)⁵: the cooperative for the production- distribution- consumption of ecological products which has at its disposal its own farming lands.

- Sin Coste (Without Cost)⁶: shop in which one can for free the clothes that other people leave because they do not use it. In this manner, the mon-

³ <http://www.laceiba.org>

⁴ <http://www.sindominio.net/karakola/>

⁵ <http://bah.ourproject.org/>

⁶ <http://patiomaravillas.net/sincoste>

The DWS has become the marked week for the collectives and individuals who strive for the transformation of the contemporary lifestyle

etarist logic of the commercial exchanges is criticized from the practical point of view.

- Traficantes de Sueños (Dream Merchants)⁷: the associated book-store with its own publishing house, which cooperates with the alternative - distribution nets in order to enrich political debate and to fight closeminded thinking. In this case, the people also were informed about the alternatives to authors' rights and the licences known as copyleft.

- Diagonal⁸: an independent every - fortnight newspaper containing the alternative up to date information about the point of view of the social

movements. It is an example of the cooperative project which offers critical information which is against the reality built as a result of the hegemony of the mass media.

Speaking of the repercussion of the Day Without Shopping, although the number of people who assist the programmed activities is usually not very big, we can nevertheless beyond a shadow of doubt affirm that the number of cities and groups which participate in its celebration grows progressively every year. The same is observed with the repercussion of the media: this year numerous national and local communication means (newspapers, radio and television) echoed the celebrated activities, as well as the innumerable Web pages.

The DWS without any doubt has become the marked week for the groups and individuals who strive for the transformation of the production, distribution and consumption model, as well as of the contemporary life style.

For more information

<http://www.adbusters.org/campaigns/bnd>

<http://www.ecologistasenaccion.org/spip.php?rubrique202> ■



⁷ <http://www.traficantes.net/>

⁸ <http://www.diagonalperiodico.net/>



Global Exchange: Initiatives related to Sustainable Consumption and Civil Society

Tex Dworkin
Global Exchange
Director of Marketing

Global Exchange is an international human rights organization dedicated to the promotion of environmental, political and social justice. Since its foundation in 1988, this non-profit organization has increased the US public's global awareness while building partnerships worldwide.

Through programs such as Reality Tours, Public Education, and Fair Trade, Global Exchange works for human rights and social and economic justice through grassroots citizen empowerment. The organization also launches other punctual campaigns that become authentic traditions such as "Sweet Smarts" or sweatfree.

All these initiatives respond to a people-centered globalization that values the rights of workers and the health of the planet and which aims to create a local, green economy designed to embrace the diversity of the communities.

Keywords: fair trade, justice, human rights organization, reality tours, sweatfree campaign, Sweet Smarts, clean energy economy.

Global Exchange : Initiatives en Rapport avec la Consommation Durable et la Société Civile

Global Exchange est une organisation internationale pour les droits de l'homme dévouée à la promotion de la justice environnementale, politique et sociale. Depuis sa création en 1988, cette organisation à but non lucratif a contribué à approfondir la conscience globale du public américain, tout en construisant des partenariats partout dans le monde.

Grâce à des programmes tels Reality Tours, Public Education et Fair Trade, Global Exchange travaille pour les droits de l'homme et la justice sociale et économique à travers la responsabilisation des militants de base. L'organisation également lance d'autres campagnes ponctuelles qui sont devenues une authentique tradition telle « Sweet Smarts » ou sweatfree.

Toutes ces initiatives répondent à une globalisation centrée sur les personnes qui évalue les droits des travailleurs et la santé de la planète et cherche à créer une économie verte locale, conçue de façon à inclure la diversité des communautés.

Mots clés : commerce équitable, justice, organisation des droits de l'homme, reality tours, la campagne "sweatfree", économie à base d'énergie propre.

Global Exchange: Iniciativas relacionadas con el Consumo Sostenible y la Sociedad Civil

Global Exchange es una organización internacional de derechos humanos dedicada a la justicia medioambiental, política y social. Desde su fundación en 1988, esta organización sin ánimo de lucro ha ampliado la conciencia global de la población de los Estados Unidos, a la vez que ha construido asociaciones y sociedades en todo el mundo.

A través de programas tales como *Reality Tours* (Tours Reales), Public Education (Educación Pública) y *Fair Trade* (Comercio Justo), Global Exchange trabaja por los derechos humanos y la justicia social y económica a través de la potenciación de ciudadanos de base. La organización también lleva a cabo, ya de forma puntual, otras campañas que se convierten en auténticas tradiciones, como por ejemplo "Sweet Smarts", o la campaña "sweatfree".

Todas estas iniciativas responden a una globalización centrada de la gente que valora los derechos de los trabajadores y la salud del planeta y sus objetivos de crear una economía local, verde, diseñada para acoger la diversidad de las comunidades.

Palabras clave: comercio justo, justicia, organización de derechos humanos, reality tours, campaña "sweatfree", Sweet Smarts, economía con energía limpia.

initiatives for responsible consumption: social initiatives

In 1988, Medea Benjamin, Kevin Danaher, Kathie Klarreich and Kirsten Moller founded Global Exchange. The formation of the organization was rooted in the increasing interdependence of national economies and the subsequent need to build political alliances across national boundaries to protect the economic, social and political rights of all people. Their view: to create an organization based upon education-for-action which would support and partner with the international grassroots movement fighting for these human rights. In a world where the economics of quantity fuels corporate power and political greed, the elite are reaping profits while working people and the planet are left to pay the price. In response to the global degradation caused by this system of elite globalization, Global Exchange envisions an alternative economy of quality centered upon protecting international human rights to ensure that the cost of globalization does not come at the expense of us all.

During these 21 years, Global Exchange has reached important accomplishments in human, economic and environmental justice. The following are details of Global Exchange programs that relate to sustainable consumption and civil society:

Global Exchange's Fair Trade Stores

The mission of Global Exchange's Fair Trade Stores is to successfully market fairly-traded products in order to:

- increase benefits for producers and consumers through economic fairness, mutual respect, and understanding, and
- build support for a more sustainable system of trade.

They strive to pay a fair price to disadvantaged producers and to support producer-initiated efforts to improve their quality of life. In addition, they seek to increase understanding and activism of U.S. consumers about unfair trade practices and the fair trade alternative.



Behind the scenes at the Global Exchange Online Fair Trade Store; holiday 2007

initiatives for responsible consumption: social initiatives

All of its Fair Trade Stores (5 physical locations plus an Online Store) set an example of working responsibly with world craft producers. Global Exchange stores generate income for thousands of artisans and their families in over 40 countries, by operating according to Fair Trade Criteria, which includes paying a fair wage within a local context and engaging in environmentally sustainable practices.

Fair Trade Coffee and Chocolate Campaigns

Global Exchange's Fair Trade campaigns educate consumers about Fair Trade and pressure large companies to convert to Fair Trade sources. Under the umbrella of their Fair Trade campaign is 'Sweet Smarts', which mobilizes a national network of individuals, from young children to senior citizens, whose simple, creative actions to educate and advocate for Fair Trade certified products transform communities and corporations to support small farmers' efforts to build a better future for their families.

The campaign "Sweet Smarts" mobilizes a national network of individuals whose creative action to educate and advocate for Fair Trade products transforms communities

Here are a few examples of Global Exchange Sweet Smarts campaign actions:

- Reverse Trick or Treating: On Halloween, campaign participants give candy back to the people at their doorsteps... Specifically, Fair Trade chocolate attached to a card with information on



Global Exchange Marketing Director Tex Dworkin visits with producers from Thai Tribal Craft outside of Chiang Mai, Thailand; Spring 2007

problems of poverty, child slavery/ abusive child labor, and environmental degradation in the cocoa fields and how Fair Trade makes a difference.

- Holiday Fair Trade Caroling: Campaigners go Fair Trade caroling, informing neighbors and communities about Fair Trade through songs.

- Valentine's Day cards: Valentine inserts are handed out to folks of all ages for them to put inside their valentines to let their loved ones know about Fair Trade.

- Curriculum: Global Exchange provides free material to teachers interested in teaching Fair Trade in the classroom.

Sweatfree Campaign

Global Exchange has joined a national "Sweatfree" campaign, an effort to ensure that the clothes, uniforms, and other products bought by our cities and states are not made in sweatshops.

Reality Tours

Global Exchange Reality Tours provide Individuals with the opportunity to understand issues beyond what is communicated by the mass media and gain a new vantage point from which to

initiatives for responsible consumption: social initiatives



Former Global Exchange Online Store buyer Jenie Farinas learns to weave at a cooperative in Luang Prabang, Laos; Spring 2007

view and affect US foreign policy. Travelers are linked with activists and organizations from around the globe who are working toward positive change.

Today Global Exchange Reality Tours organizes trips to over 30 countries

in Latin America, Africa, Asia and the Middle East. Participants learn about women's struggles in Afghanistan, the impact of oil exploration on Ecuador's indigenous communities, and the struggle for peace and justice in Palestine & Israel. Some trips give travelers an opportunity to visit cooperatives where crafts are made and farms where products are grown, so travelers can witness the benefits of Fair Trade first hand.

Speakers Bureau

Offering intellectual and experiential expertise, Global Exchange's speakers explore crucial global issues, educating and activating students and community groups across the United States.

Climate Change

At this critical time, governments and communities across the world are focused on the dire effects of global warming. At the grassroots level, an



Global Exchange Online Store Manager Abby Edelman and Director of Marketing Tex Dworkin visit with a group of basket weavers in Kwa Zulu Natal, South Africa; Spring 2008

unprecedented youth-led movement is taking the lead in demanding a new clean energy economy.

Global Exchange is educating and mobilizing youth to come up with viable solutions for the most pressing issues in the fight to stop climate change. From demanding the use of renewable, sustainable energy, to calling for green collar jobs on a mass scale, Global Exchange is working at the forefront of this new youth-led movement.

Local Green Economy

As Global Exchange Co-Founder Kevin Danaher says, "The only real antidote to corporate globalization is the local green economy." Building local, equitable economies is central to displacing the structures that give corporations power over people and the planet. By promoting the alternatives, it is Global Exchange's hope to advance the world from profit centered to people centered, from currency to community. Here are some of the local green economy initiatives Global Exchange is involved with:

- Green Festivals: Global Exchange co-founded this event. It is a celebration of what's working in communities - for people, for businesses and for the environment. Hundreds of thousands of concerned individuals over the years have attended these "parties with a purpose" aimed at forging a just, sustainable, inclusive economy!

- Green Careers Program: Global Exchange has launched a unique program that provides environmental education, job training and mentorship for city college students of the Bay View/Hunters point community in San Francisco.

- Buy Local: Global Exchange offers a plethora of resources to those interested in building their own buy local movements.

Resources

For more information about specific Global Exchange programs, here is a list of web resources:

Main organization: www.globalexchange.org

Fair Trade Stores: www.globalexchangestore.org

Fair Trade Campaign: <http://www.globalexchange.org/campaigns/fairtrade/cocoa/>

Sweat-free Campaign: <http://www.globalexchange.org/campaigns/sweatshops/>

Reality Tours: www.realitytours.org

Speakers Bureau: <http://www.globalexchange.org/getInvolved/speakers/index.html>

Climate Change: http://www.globalexchange.org/war_peace_democracy/climatechange/index.html

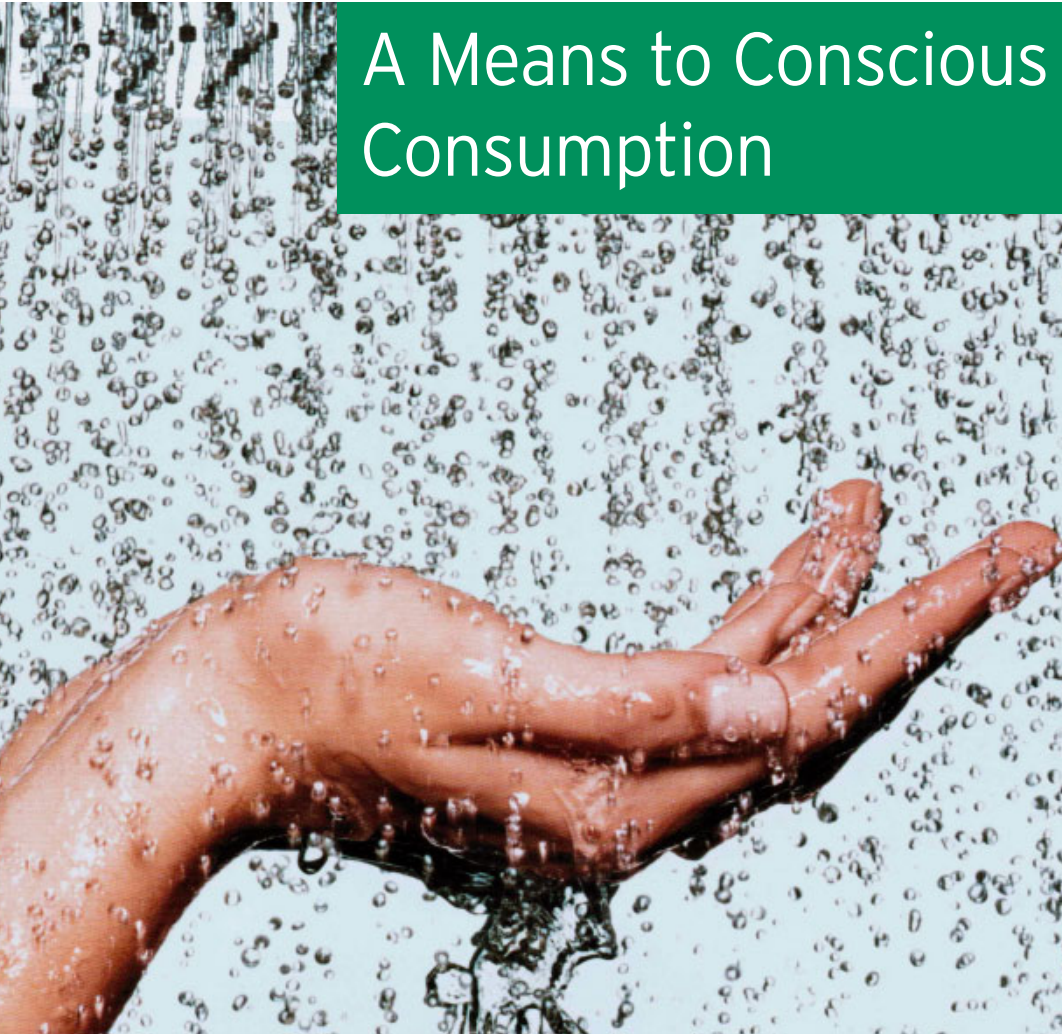
Local Green Economy: <http://www.globalexchange.org/campaigns/greeneconomy.html>

Green Festivals: www.greenfestivals.org

Green Careers: <http://www.globalexchange.org/campaigns/greencareers.html>

Buy Local: www.buylocalday.org ■

A Means to Conscious Consumption



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Many young people in today's consumer society seek social recognition and inclusion by purchasing the newest and "coolest" products on the market. Yet, when unguided, their present and future consumption patterns contribute to problems such as ozone depletion, climate change and hazardous waste that not only affect our daily lives but have an impact on the entire globe. How to balance the need to participate in the consumer society and seeking to establish their identity and lifestyles within this society with the need to combat climate change are among the key tips in the UN Environment Programme (UNEP) and the UN Educational, Scientific and Cultural Organization (UNESCO) YouthXchange Training kit. YouthXchange is a trainer tool that aims to promote sustainable consumption patterns among young consumers worldwide.

Keywords: UNEP, UNESCO, YouthXchange, sustainable, consumption, education, development, youth, YXC.

Un moyen pour une Consommation Consciente

Dans la société de consommation de nos jours plusieurs jeunes cherchent une reconnaissance et une inclusion sociales à travers de l'achat des produits les plus nouveaux et les plus « branchés » qu'on trouve sur le marché. Toutefois, sans la supervision adéquate leurs modèles de consommation actuels et futurs contribuent à des problèmes tels l'appauvrissement en ozone, le changement climatique les déchets dangereux qui affectent non seulement notre vie quotidienne, mais ont aussi un impact sur le globe entier. Comment atteindre un équilibre entre le besoin de participer dans la société de consommation en cherchant d'établir une identité et un mode de vie propres au sein de la société et le besoin de combattre le changement climatique sont quelques éléments clés du Programme des Nations Unies pour l'Environnement (PNUE) et le kit de Formation YouthXchange de l'Organisation des Nations Unies pour l'Éducation, la Science et la Culture (UNESCO). YouthXchange est un outil de formation des formateurs qui vise à promouvoir des modèles de consommation durables parmi les jeunes consommateurs du monde entier.

Mots clés : PNUE, UNESCO, YouthXchange, durable, consommation, éducation, développement, jeunesse, YXC.

Un medio para el consumo Consciente

Muchas personas jóvenes de la sociedad de consumo de hoy buscan el reconocimiento social y el sentirse parte de un grupo, haciéndose con los más novedosos productos del mercado. Aún así, y sin guía, sus patrones de consumo presente y futuro contribuyen a la acentuación de problemas tales como la merma de la capa de ozono, el cambio climático y el aumento de los residuos tóxicos que no solo afectan a nuestras vidas diarias, sino que además impactan en el mundo entero. La forma de equilibrar la necesidad de participar en la sociedad de consumo por un lado, y por otro la de la búsqueda del establecimiento de una identidad y estilos de vida en una sociedad que necesita combatir el cambio climático están entre los puntos clave del Programa para el Medio Ambiente de las Naciones Unidas (UNEP, en sus siglas originales en inglés), en conjunto con la Organización para la Educación, la Ciencia y la Cultura de las Naciones Unidas (UNESCO), y el kit de formación "YouthXchange". "YouthXchange" es una herramienta "train the trainer" (formar al formador), cuyo objetivo es promover patrones de consumo sostenible entre los jóvenes consumidores en todo el mundo.

Palabras clave: UNEP, UNESCO, YouthXchange, sostenible, consumo, educación, desarrollo, juventud, YXC.

It is only in recent years that a pervasive communication effort has been made to encourage questioning and critical behavior among consumers. Stepping away from the preachy and often dramatic communication on environmentally-sound consumption, awareness-raising has increasingly focused on linking our every-day life choices with the environment.

In 2001, UNEP and UNESCO decided to “brand” the idea of sustainable lifestyles as “cool” rather than necessary, as “smart” rather than responsible. Initially focusing on urban youth ages 15 to 25, the **UNEP UNESCO youthXchange training kit on responsible consumption - towards sustainable lifestyles** responds to the need for reliable yet entertaining information on the meaning and challenges of consumption among youth. The focus on the training kit is to empower young people to put theory into practice by fostering what they are best at: *communication and exchange of ideas and practices*.

Why young people?

Many young people today seek social recognition and inclusion by purchasing the newest and “coolest” products on the market. Yet, when unguided, their present and future consumption patterns contribute to problems such as ozone depletion, climate change and hazardous wastes that not only affect our daily lives but impact the entire globe.

“There are more young people than ever before: more than 1 billion aged 15 to 24. As the largest-ever generation of young people enters adulthood, education and information can affect when they marry, how many children they will have, and the well-being of their future families and the nations in which they live.” “The large number of young people in developing countries also could enhance economic development as they enter their working-

“The UNEP UNESCO youthXchange training kit responds to the need for reliable yet entertaining information on the meaning and challenges of consumption among youth”

age years. Increase in the working-age population will continue until 2005-2010, but from then on” as young people start to age, “the proportion of working-age people able to support the young and old will decrease. Between the present moment and 2010, 700 million young people will enter the labour force in developing countries, an unprecedented ‘demographic bonus’ of human resources”¹.

These numbers speak for themselves; providing an idea of how important the impact of youth, their lifestyles and their professional decision-making patterns are in shaping a better future. The buying and decision-making power of one billion youth is far from homogeneous, in fact one half of the young population mentioned above lives below the level of poverty. On the other hand, youth in affluent societies account for a large part of total consumption and are under constant pressure to consume more. Aided by the globalization of the media, the portrayal of the mostly materialistic youth lifestyle in the most affluent countries and society groups may influence attitudes and consumption patterns among youth in less developed societies.

This risk, and current unsustainable consumption patterns of young and less young consumers, should encourage stakeholders of all ages, and cultures and backgrounds to join forces to reach a truly sustainable development.

¹ From Population Issue Briefing Kit 2001, UN Population Fund, www.unfpa.org, see also 2005 edition.

Consumption's paradigms

In 2000, UNEP and UNESCO collected and analyzed the results of the joint survey **"Is the future yours?"** Conducted in 24 countries and reaching out to 10,000 youth, this survey gathered information on their aspirations, interests and awareness of their role in building a more environmentally and ethically responsible present and future. The survey targeted *urban middle class* youth due to the belief that the most urgent changes in lifestyles and consumption patterns were needed in more industrialized nations. Consumption and production patterns in industrialized countries have a significant influence in the developing world:

- Western consumption patterns have a strong power of attraction on youth in rapidly industrializing economies and are often presented by

media and advertising as a model to follow (noted in the survey);

- On the production side, a large quantity of products sold on affluent markets are manufactured and assembled in countries where controls over work conditions and respect of environmental protection are rather low. In this sense the adoption of more sustainable supply chain policies by companies could have a very positive effect on local producers.

The results revealed the paradigms of consumption - where young people consider the environment, human rights and health as key concerns for the future but do not note a correlation between their consumption patterns and the environment's degradation. Furthermore, the survey highlighted youth's preference for individual action over collective action to improve the state of the world.

The results were confirmed by a subsequent survey on youth and consumption carried out by the advertising agency McCann-Erickson in co-operation with UNEP in 2001. This second survey confirmed that the concept of sustainable consumption remains what McCann-Eriksson defines as "a big ignorance" among youth and that alternatives to irresponsible consumption are not well understood. Price, name of the brand, quality and peer pressure all scored higher than "sustainability" in a ranking of important purchasing conditions.

In both surveys the youth showed that they felt responsible for themselves, their friends and their family, but at the same time felt powerless, unable and unwilling to do what they think of as "someone else's job".

How can education influence more sustainable lifestyles?

Mobilizing consumer societies to adopt more sustainable lifestyles and consumption patterns has become one of



the biggest challenges to sustainable development. This is true not only for the developed part of the world, but also for developing countries. As a result of globalized markets, populations in developing countries participate in the production and consumption cycle, both as victims of the negative impact of unsustainable production as well as consumers.

There is a huge divide in the level and quality of consumption among populations in the developed and developing countries. However, middle class consumption in the world is rather homogeneous - youth have access to similar education, information, television and the Internet. They have a comparable mythology such as pop stars, actors, icons as well as life aspirations. The number of people who belong to this middle class represent a vast majority of the population in industrialized countries and a lucky minority in developing countries. As a result, consumer aspirations among young people all over the world are more or less similar. *Everywhere these young people have the power to shape ideas, trends, cultures and thus consumption patterns and aspirations.*

Education, learning, public awareness are essential prerequisites for a transition to sustainable societies. Education for Sustainable Consumption (ESC) should lead to an understanding of key concepts related to sustainability by linking a complex concept such as sustainable development to a specific day-to-day life. Reflecting on personal consumption behaviors, assumptions and experiences should enable individuals, across the age spectrum, to analyze patterns, causes and impacts of global and personal patterns of consumption and to unfold the ethical dimension of reducing the social and ecological impacts of human productive activities at global level. If the deepest educational process was once the informal process of learning to consume, the process of learning

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to consume in a more sustainable fashion remains one of the greatest educational challenges of the 21st centuryⁱⁱ.

YouthXchange as a resource for many

The UNEP UNESCO YouthXchange training kit on responsible consumption - toward sustainable lifestyles addresses this 21st century education challenge and the problem of a dire lack of reliable resources for teaching about sustainable lifestyles as expressed by educators and youth. As such, the kit is designed to assist, youth groups, NGOs, teachers and trainers in raising and acquiring awareness of the opportunities offered by the adoption of more sustainable consumer choices in a youth friendly format. It is an interdisciplinary, multi-methodological and holistic approach to sustainable consumption and can be used in formal as well as non formal education settings. It involves a participatory process based on interaction and cooperation between teachers and youth, on discussion, and learning from experience.

To make sustainable consumption more immediate to youth, the YouthXchange tool kit refers to the notion of lifestyles rather than consumption: this way healthy eating, the sex trade or media literacy are included in the discourse as significant factors in developing consumer awareness. While many consumer education information tools focus on the well being and rights of the individual consumers, the YouthXchange program aims at contributing to an understanding of the impact of our consumption at large. The kit provides statistics, case studies, games and practical tools that fit the multiple dimensions of SC into the educational curricula - making a clear link between the way we live and act in society and the wider complex issue of sustainable development.

ⁱⁱ OECD (1998). Education and Learning for Sustainable Consumption.

YouthXchange and supports knowledge- building and sharing through workshops and, ultimately, joint projects among youth in different countries and cultures. The implementation of training

The Norwegian government has disseminated the YouthXChange toolkit to all secondary schools and all the pedagogical libraries and institutions

activities is secured through a large network of local partners and youth organizations that have translated, adapted and disseminated the guide in their region as well as provided trainings and workshops on the materials.

To assure a good dissemination of YouthXchange, an approach similar to franchising has been adopted whereby UNEP and UNESCO find partners in countries to undertake translation, adaptation and training at a local level. The main delivery agents for YouthXchange are varied - ranging from non-governmental organizations, schools and government education programs to private companies that implement the kit in a locally and culturally adapted manner and integrate it within ongoing environmental education activities. So far YouthXchange is implemented by about 25 partner organisations, translated and adapted in 19 languages with a bilingual (French/English) website and related pedagogical resources (slides, exercises for teachers etc.).

In Norway, where education for sustainable development is already part of the national school curriculum, YouthXchange has been integrated into the formal education system. The Norwegian government, has disseminated the YouthXchange toolkit to all secondary schools and all the pedagogical libraries and institutions in Norway along with the provision of training sessions on ESC. In Portugal,

YouthXchange is being adapted and implemented by a communication company on sustainable development who is developing a roadshow on sustainable consumption; tailored to the different target audiences they will reach throughout Portugal. In Japan, a communication company developed a children version of YouthXchange and disseminated the kit through UNESCO affiliated schools and other primary schools in Japan with great success.

YouthXchange is currently implemented by national partners in the Mediterranean region including France, Greece, Spain (Basque and Catalan), Portugal, Italy and Slovenia. It is expected to spread to Turkey, Croatia, Morocco, Tunisia, Algeria and Israel in 2009.

The challenges and opportunities of ESC

At the national or local level, mainstreaming of ESC in formal education curricula and the integration of ESC in informal education is a challenge. Across the globe, ESC is not considered a priority and therefore still in the preliminary planning stages, often carried out by local non-profit organizations that lack the tools and means for action. Although developed countries are increasingly engaging in ESC, they nonetheless remain responsible for the bulk of the world's resource consumption. Simultaneously, consumption is rising in the developing world - a part of the world where an increasing share of the global consumer class now resides. According to the World Watch's annual report State of the World 2004, around 1.7 billion people worldwide have entered the "consumer class", adopting the diets, transportation systems, and lifestyles that were limited to developed nations during most of the last centuryⁱⁱⁱ. While this "consumer class" experiences an increased standard of living, it also generates an even more dangerous

threat on developing nations with already fragile and at-risk environments.

The added value and success of **UNEP UNESCO YouthXchange** stems from a rising consciousness of the need to change towards more sustainable consumption patterns and from the importance of education in this regard. In 2002, the United Nations (UN) General Assembly adopted, by consensus, the resolution establishing a Decade of Education for Sustainable Development (DESD, 2005-2014)^{iv}. The establishment of a DESD, lead by UNESCO, affirms the need to integrate sustainable development into education systems at all levels in order for education to be a key agent for change. It recognizes that "consumption lies at the heart of the debate on sustainable development".

What's next...

Born as a small initiative, YouthXchange has expanded rapidly in all regions of the world with an accruing interest from developing countries. Its continued expansion through a network of organizations interested in actively educating youth on sustainable consumption remains an essential component. Yet this component can only be strengthened by a continued understanding of young people's aspirations and lifestyles.

As such, YouthXchange is following up on the **"Is the future yours?"** survey and participating in the **Global Survey on Sustainable Lifestyles (GSSL)** (to be finalized in 2009) - a joint initiative of the Task Force on Sustainable Lifestyles led by Sweden and UNEP, as part of the Marrakech Process on Sustainable Consumption and Production (SCP)^v. The GSSL is both aimed at:

1. inspiring young adults from all over the world and exploring their views and aspirations with regards to lifestyles and sustainability;
2. inspiring policy-makers and other stakeholders in the design of solu-

tions and policies that promote sustainable lifestyles. Young adults (18-35 years old) from all regions fill the online questionnaire to share their experience and expectations in terms of lifestyles as well as their vision of sustainability, responding to a series of short video scenarios on food, mobility and energy consumption.

How to create, promote and mainstream desirable visions of more sustainable living? The question remains a big challenge as it involves changes in the governmental policy level, from business initiatives, public authorities, NGOs, education institutions, communities and from the individuals. Education and communication play an essential role in supporting, promoting and normalizing visions of sustainable lifestyles. Therefore it is important to stimulate debate and investigate what representations of sustainable lifestyles people have and how additional images of more sustainable lifestyles can be created considering the cultural, historical, natural and social heritage of each country, each region, creating a web of consumer sustainability worldwide ■

ⁱⁱⁱ From World Watch Institute State of the World 2004, <http://www.worldwatch.org/node/1783>.

^{iv} United Nations General Assembly Resolution 57/254.

^v The Marrakech Process is a global effort to promote progress on the implementation of SCP and the elaboration of a 10-Year Framework of Programmes on Sustainable Consumption and Production (10YFP). The process responds to the call of the WSSD Johannesburg Plan of Implementation to develop a 10YFP to support regional and national initiatives to promote the shift towards sustainable consumption and production (SCP) patterns. The MTF on Education for Sustainable Consumption (led by Italy) is set on achieving progress in the introduction of sustainable consumption and production (SCP) issues into formal learning processes considering appropriate links to non-formal and informal education.

For more information, go to <http://www.unep.fr/scp/marrakech/>





Practice and Research: Promotion of Sustainable Consumption Patterns

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The concept of Sustainable Consumption (SC) has gained influence during the last decades in Southern Europe. The most important individual-level factors influencing consumption are awareness, attitudes, social norms, culturally acquired behaviour, socio-economic factors or access to information. SC can therefore be seen as a process of social change and collective learning, based on the cycle of individual change “knowing, wanting and being able”. Some examples of how to enable pro-environmental behaviour and SC carried out in Spain in the last years will be presented. To promote SC on a broader scale, a plurality of instrument types (regulatory, economic, communicative,...) and a mix of coherent policies will be necessary. In this respect, the research project “European Policies to Promote sustainable Consumption Patterns (EUPOPP; 2008-2011) links sustainable consumption policy analysis with in-depth empirical research and material flow analysis in two main areas of SC: housing and food.

Keywords: Sustainable Consumption (SC), individual change, collective learning, Spanish examples, informed consumers, EUPOPP.

Pratique et recherche : Promotion des Modèles de Consommation Durable

Depuis quelques décennies le concept de Consommation Durable (CD) a acquis une grande importance en Europe du Sud. Les facteurs les plus importants à niveau individuel qui influent sur la consommation sont la conscience, les attitudes, les normes sociales, le comportement acquis de la culture, les facteurs socioéconomiques ou l'accès à l'information. La CD pourrait être vue comme un processus de changement social et d'apprentissage collectif, sur la base du cycle de changement individuel « savoir, vouloir et pouvoir ». Quelques exemples sur la manière d'encourager un comportement pro-environnemental et une CD en Espagne durant les dernières années seront présentés. En vue de promouvoir la CD à grande échelle, une multitude de types d'instruments (régulateurs, économiques, communicatifs...) et un mélange de politiques cohérentes sera nécessaire. A cet égard, le projet de recherche « Politiques Européennes pour Promouvoir les Modèles de Consommation Durables » (EUROPOPP ; 2008-2011) établit des rapports entre l'analyse de la politique de consommation durable, d'une part, et la recherche empirique approfondie et l'analyse du flux matériel dans deux aires de la CD : l'hébergement et l'alimentation, d'autre part.

Mots clés : Consommation Durable (CD), changement individuel, apprentissage collectif, exemples espagnols, consommateurs informés, EUPOPP.

Un medio para el consumo Consciente

El concepto de Consumo Sostenible (CS) ha cobrado importancia en las últimas décadas en el sur de Europa. Los factores individuales que más están influyendo en el consumo son la conciencia, las actitudes, las normas sociales, el comportamiento cultural adquirido, los factores socio-económicos o el acceso a la información. El CS puede, consecuentemente, ser visto como un proceso de cambio social y de aprendizaje colectivo, basado en el ciclo de cambio individual «conociendo, queriendo y siendo capaz». Se presentan algunos ejemplos de cómo facilitar una actitud a favor del medio ambiente y que el CS llevó a cabo en España en los últimos años. Para promover el CS en una escala más ancha, se harán necesarias una pluralidad de tipos de instrumentos (regulatorio, económico, comunicativo,...) y un mix coherente de políticas, absolutamente imprescindibles. A este respecto, el proyecto de investigación «Políticas Europeas para la Promoción de Patrones de Consumo sostenible» (EUPOPP en sus siglas en inglés; 2008-2011) vincula el análisis de las políticas de consumo sostenible con una profunda investigación empírica y un análisis de flujo de materiales en dos áreas principales del CS: vivienda y alimentación.

Palabras clave: UNEP, UNESCO, YouthXchange, sostenible, consumo, educación, desarrollo, juventud, YXC.

Consumption is a key lever to attain a more sustainable development: unsustainable consumption patterns are major causes of global environmental deterioration, including the overexploitation of renewable resources and the use of non-renewable resources with their associated environmental impacts.

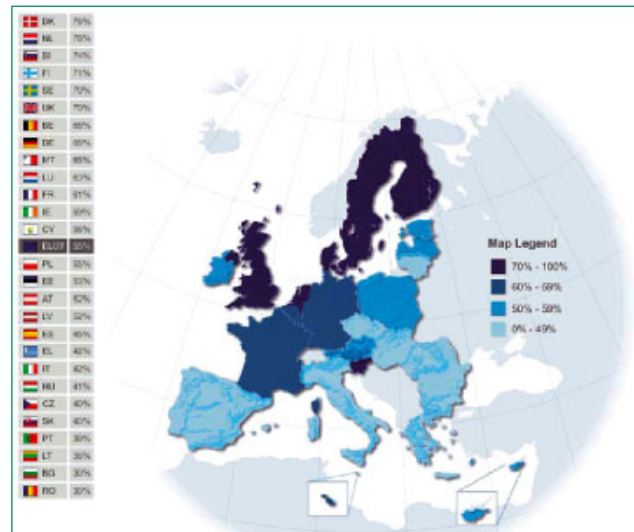
Assumptions about SC in Southern Europe

In Southern Europe, preoccupation for environmental issues is an emerging value, which has been gaining importance during the last 2 decades. However, there's a remarkable gap between this value and individual actions and lifestyle, in other words, the level of consciousness is much higher than individual action. This corresponds to the logic of all processes of change: the construction and assumption of values happen before putting them into practice, but the distance between our thinking and our action is still wide apart. Sustainable Consumption can therefore be seen as a process of social change and collective learning, based on the cycle of individual change "knowledge, willingness and ability".

Generally we can differentiate between "traditional lifestyles" based on austerity - related to our historical and cultural background - and a "new generation" of Sustainable Consumption, associated with more knowledge, complexity or cost.

Knowing, wanting and being able

In the cycle of individual change -*knowing, wanting and being able* - "wanting" or the willingness to act is directly related to the construction of common values, e.g. the linkage between global environmental problems and the influence of individual action. In this sense, "environment" in Southern



How informed do you feel about environmental issues?

Europe is still mostly identified with loss of biodiversity, desertification or climate change but not with individual lifestyles or consumption patterns.

The perceived level of information about environmental issues - "knowing" - is in Southern Europe still far behind the perception of inhabitants of Northern or Central Europe, as reflected in the Euro-barometer.

Cultural and socio-economical influences

At an individual level, factors like awareness, attitudes, cultural acquired behaviour, social norms, socio-economic factors or access to information are influencing consumption behaviour. The *Survey about habits and values regarding environment and sustainability in Barcelona (2000-2004)* identifies the following target groups: the "Engaged", the "Compliers", the

Sustainable Consumption can be seen as a process of social change and collective learning

The most successful experiences promote SC in Spain at local level combine various instrument types and are the result of joint experiences and common learning processes

“Occupied”, the “Not-well-informed” and the “Disregarded” people. The most engaged people in Barcelona are

- older and/or retired people
- women
- people with higher education
- accompanied people
- people that carry out housekeeping activities.

To promote SC, each segment of the population needs an individual approach or strategy. In this sense, DEFRA differentiates “4Es” -*Enable, Engage, Exemplify and Encourage*-, which should be combined in function of the willingness and ability of each segment regarding Sustainable Consumption.

“Being Able”: Strategies to enable pro-environmental behaviour EU-POPP

To promote SC on a broader scale, a plurality of instrument types (regulatory or economic instruments, voluntary instruments as eco-labels, consumer information and education, Green Public Procurement...), which influence both demand and supply side is necessary:

the research project EUPOPP -*Policies to Promote Sustainable Consumption Patterns in Europe* - assumes that sustainable consumption strategies and instruments impact on consumption patterns - and subsequently on sustainability - by influencing individual-level (personal) factors of consumption on the one hand, and by affecting consumption-relevant framework conditions (systems of provision) on the other hand.

Examples of successful experiences

The most successful experiences to promote SC in Spain at a local level combine various instrument types and are the result of joint experiences and common learning processes. These experiences combine clear messages, relevant environmental information, visible and realistic objectives and resources to put into practice more sustainable lifestyles¹.

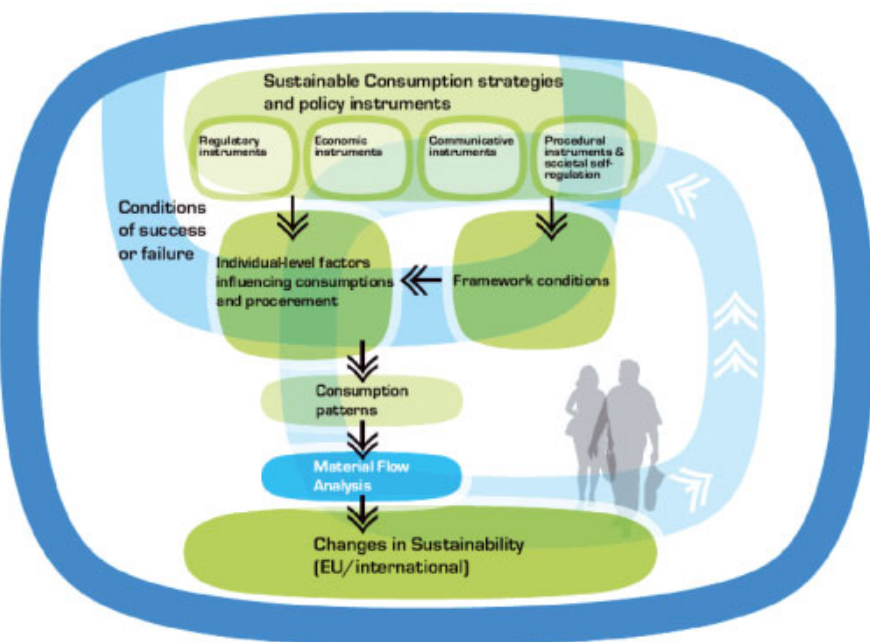
Example 1

Zaragoza saves water

The campaign “Zaragoza saves water” started with a EU-LIFE-Project more than 10 years ago. During this long-term commitment, a network of actors has been developed. The implication of civil society, schools, public administrations and private companies is very high: actually more than 170.000 individuals and entities are committed to saving water.

With specific water saving guidelines and advice for different target groups, training for professionals and a broader set of activities, important water saving per inhabitant has been achieved since the beginning of the campaign.

¹ Sources: Defra 2008 and Öko-Institut 2007.

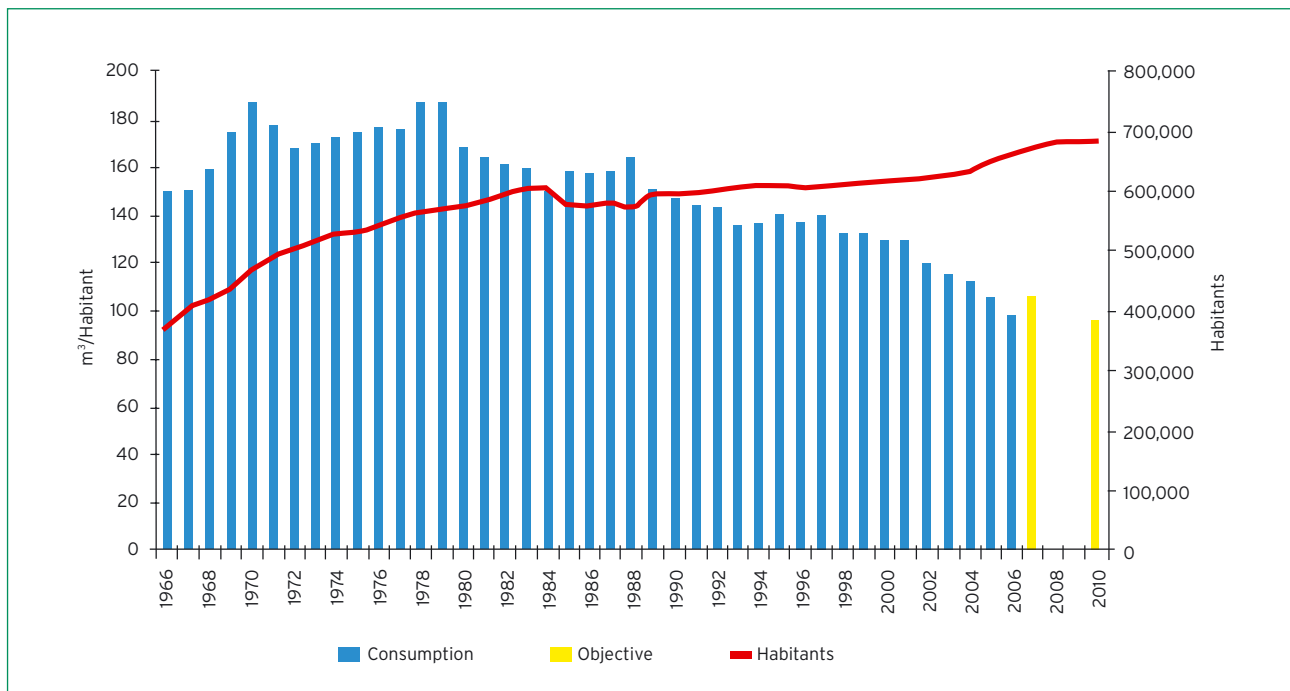


initiatives for responsible consumption: institutional initiatives

And with the good results obtained in the campaign, the experience has been successfully exported to other regions of Spain.

Example 2

Agenda 21 in Barcelona: a participatory process to change Barcelona's Agenda 21, which creates the connection between global responsibility and local action, has been perceived from its beginning in 1997 as a joint responsibility of all actors. More than 400 entities (small and big companies, NGOs, experts associations, etc.) assumed



and signed the “People’s commitment towards sustainability”. Actually, the entities are developing their individual action plans with fixed objectives in order to contribute to a more sustainable city and planet.

Supporting materials are more than 30 “Environmental Education Guides”, which has been developed for specific environmental and social priorities (water, waste, energy, mobility, fair trade, responsible investments...) and for specific actor groups (local au-

thorities, associations, enterprises, trade unions or citizens at an individual level).

In that context, e.g. the UNEP YouthX-Change Guide has been adapted to the local situation in Barcelona: the Catalan Version has been developed with local youth associations and includes best practice examples and resources from Barcelona.

Complementary elements of the Agenda21 are a network of interchange, which includes the “Breakfasts

of actors", the yearly Award21 for the best initiatives, a special A21 program for schools and the internal program of the City Council "More Sustainable City Council", focused on sustainable public purchasing.

Example 3

The role of public authorities (leading by example) and the use of economic instruments at local level: The Implementation of BICING in Barcelona

An example of a successful combination of various instrument types -economic instruments, regulatory instruments and communication strategies - is the process of implementation of a bicycle renting system in Barcelona, financed by local taxes.

In the 80s, 20 - 25 years ago, the bike was promoted by a grass root movement. "Friends of the Bike" and other civil organisations asked for more security and for the provision of bike lanes and parking infrastructures. Only very few convinced and compromised bike users used the bike in Barcelona.

About 10-15 years ago, a more committed Mayor and the entrance of the "green party" in the local government fostered the definition and construction of the first bicycle lanes and the promotion of the bike for leisure uses. A relevant anecdote for the future of bikes in Barcelona is that during those years, the Mayor, Pascual Maragall, was once fined by the local policy for circulating by bike on the side-walk of one of the main streets in Barcelona (las Ramblas).

Finally, after years of a slow but consistent increase of bike users and bicycle infrastructures, in 2007 a public renting system for bicycles is introduced, the *Bicing*. The system is financed by a new tax-system for car parking in public spaces, based on low taxes for neighbours in their own zones and very high taxes for non-neighbours.

The bicycle renting system in Barcelona is an example of successful combination of economic instruments, regulatory instruments & communication strategies

During the first 4 month of implementations, *Bicing* got 80.000 members. At the end of 2008, *Bicing* had 180.000 members, more than 10% of Barcelona's inhabitants. Some success factors of *Bicing*:

- The use of economic instruments; high taxes for private car use are directly invested in the promotion of sustainable mobility concepts

- The win-win situation for citizens: the public bike systems resolves problems like

- Using the bike is healthy: the time of every day travel to work is used for corporal exercise
- The use of the bike substitutes partly the use of public transport
- No private space is needed for the storage of the bike, no fear for it to be stolen
- The possession of a good is substituted by a service.

An integrated approach to SC: the Basque Plan for Environmentally Sustainable Consumption (2006-2010)

The Basque Plan for Environmentally Sustainable Consumption is along the line with the Sustainable Consumption Policy of the European Union. The Plan discusses the following subjects: residential energy consumption, water consumption, transportation, urban waste, consumption of food and other domestic products. Objectives of the plan are to inform citizens about the effects of their consumption standards (knowledge), to raise awareness and to train (to train what? transitive verb) in order to achieve a more sustainable consumption (willingness) and to place progressively more sustainable products in the market (ability). The specific programs are: *Informed Consumers, Prepared Consumers, Aware Consumers, Exemplary Administration, Eco-Approved Product and Sufficient Market*.

initiatives for responsible consumption: institutional initiatives

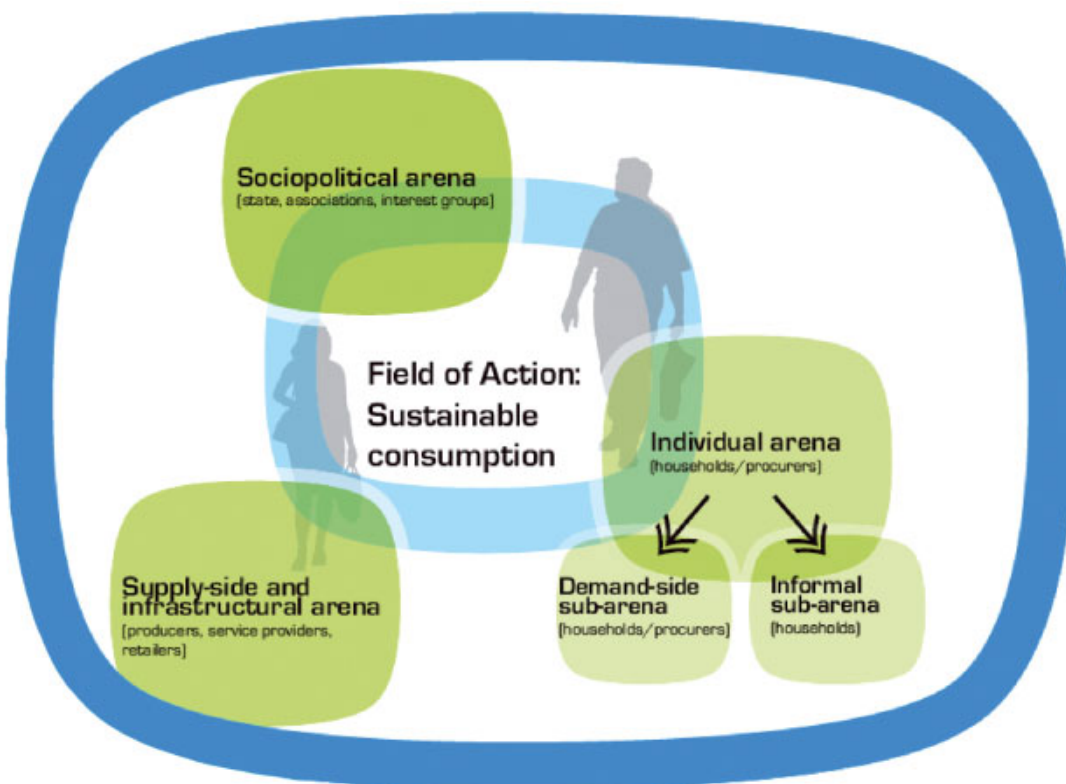
A set of actions for each line - knowledge, willingness and ability - have been defined and are being implemented, including awareness raising programs for different sectors, the set up of Green Public Purchasing policies or environmental certification of products and services, among others. The Follow-Up Committee includes 5 departments of the Basque Government. Although in 2006 more than 80% of the planned actions were very advanced or in progress, collective actions (to be carried out among several Departments) present the lowest degree of progress.

Research on sustainable consumption *EU-Popp: European Policies to Promote Sustainable Consumption*

Do these initiatives have a real influence on consumption patterns and impacts on sustainability? The EUPOPP project addresses the following questions under the umbrella of an over-

all conceptual framework for portraying the relationships between SC policies, consumption patterns and sustainability:

- What are consumption / production trends and what are the respective sustainability **potentials** of SC policies
- In general and in selected need areas?
- How can impacts of policy instruments on sustainable consumption be assessed and how do they influence sustainable consumption - mainly in the necessity areas housing and food?
- What are the conditions of success or failure that promote or hamper the impacts of a SC instrument on consumption patterns?
- What are options to enhance sustainable consumption policies and instruments?
- The project results will promote sustainable consumption in two main arenas of Sustainable Consumption and Production: housing and food.



The EUPOPP-project is a linking policy analysis with in-depth empirical research and material flow analysis. The project will deliver products of different shape and scope. Besides the elaboration of policy papers, e.g. on gender aspects, European SC strategies, or the consumption and production trends, several stakeholder workshops, regional procurer workshops, focus groups and a final conference will be held. (Postponing the predicate weakened the effectiveness of the sentence).

Conclusions

Although the concept Sustainable Consumption has gained presence in the public opinion and the political arena, there is still a gap between this value and individual actions and lifestyle. In this respect, the 7FP EU-POPP research aims to assess SC policy effectiveness into consumption patterns by policy analysis of different and complementary policy instruments (communicative, economic, normative...) and in-depth empirical research and material flow analysis.

The SC successful experiences carried out in Spain such as Zaragoza saves water, Agenda 21 and Bicing in Barcelona or the Basque Plan for Environmentally Sustainable Consumption are characterized by taking into account the cycle of change “knowledge, willingness and ability” and therefore are long term initiatives that provide clear and relevant environmental messages, visible and realistic objectives and put other necessary resources to favour lifestyle sustainable changes.

Moreover, the experiences of Spanish SC public bodies show the importance of combining different policy instruments (communicative, regulatory, economic...), leading by example, and last but not least, all these experiences count on the civil society collaboration and complicity.

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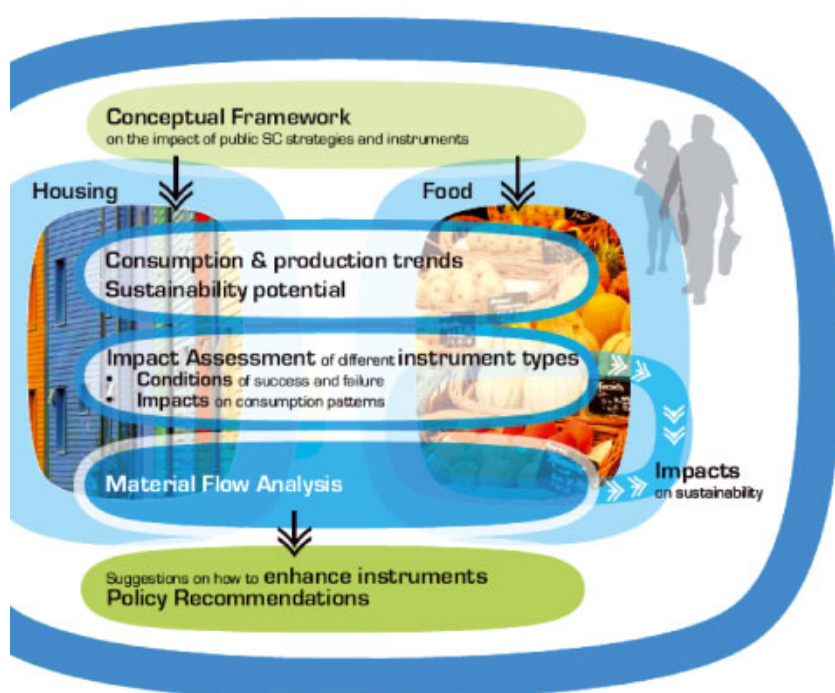
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Ecobuildings, an opportunity for everybody

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Three years ago, the Government of Catalonia approved a decree which promotes the adoption of criteria of environmental practices and ecoefficiency in buildings. It obliges to build according to the guidelines of energetic efficiency and with a minimum of materials fixed by the environmental label. The fact that the adoption of these guidelines means energy savings for the inhabitants encourages the consumers to demand the construction of this type of buildings.

This is the aim of the decree, but there is something more. It is also addressed to old buildings which need to be refurbished by installing systems which will improve its efficiency, like presently better thermal and acoustic isolations.

Keywords: ecobuildings, energy saving, passive restraint of efficiency, energy, housing, isolations.

Eco-édifices, une opportunité pour tous

Il y'a trois ans le Gouvernement Autonome de la Catalogne a approuvé un décret pour promouvoir l'adoption de critères environnementaux et d'éco-efficience dans les édifices qu'il construit, imposant des mesures d'efficience énergétique et avec un minimum de matériaux portants une étiquette environnementale. Le fait qu'il s'agit de mesures qui génèrent une épargne économique pour ses habitants favorise la demande de ce type d'édifices de la part du consommateur.

Toutefois, l'objectif du décret va plus loin. Il est dirigé également aux vieux édifices qui devront être réformés pour y incorporer des systèmes qui améliorent leur efficience, tels l'isolement thermique et acoustique.

Mots clés : éco-édifices, épargne d'énergie, contrainte passive d'efficience, énergie, logement, isolements.

Ecoedificios, una oportunidad para todos

Hace tres años, la Generalitat de Catalunya aprobó un decreto por el cual se promueve la adopción de criterios para llevar a cabo prácticas medioambientales y de ecoeficiencia en edificios. Obliga a construir de acuerdo a las líneas maestras de eficiencia energética y con un mínimo de materiales fijados por la etiqueta medioambiental. El hecho de que la adopción de estas líneas maestras implica ahorros energéticos para los habitantes anima cada vez más a los consumidores a solicitar la construcción de este tipo de edificios.

Este es el objetivo del decreto, pero aún hay más, pues también es de aplicación a edificios antiguos que necesitan ser reformados mediante la instalación de sistemas que mejorarán su eficiencia, como los actuales y mejores sistemas de aislamiento térmico y acústico.

Palabras clave: ecoedificios, ahorro de energía, restricción pasiva de eficiencia, energía, vivienda, aislamientos.

In February 2006 the government of the Generalitat de Catalunya approved the Decree 21/2006 of 14th of February, which regularizes the adoption of criteria of environmental practices and ecoefficiency in the buildings of new construction and of those which require total refurbishment.

The increase in energy prices, which surely will continue rising, spreads the concern for minimizing the expenses

The approval of this legislation, pioneer in Spain, lies within the framework of commitments made by Spain to carry out the Kyoto Protocol with a direct and main goal to reduce emission of CO₂ during the construction of buildings.

Beside from promoting the obligation of installing certain measures in buildings with the aim to save either water or energy and to incorporate renewable energy technologies, the decree has a teaching will to make all professionals involved in the sector give a second thought about the used materials or which solutions related to construction are the most suitable for our climate. This way for example promotes optional solutions such as ventilated or vegetable covers, the improvement of thermal isolations in buildings, the recycling of water coming from toilets and showers, the installation of prefabricated and preindustrialized elements in construction, or crossed natural ventilation and much more.

At the same time the decree obliges to use a minimum of materials with environmental label type I or III in the construction of buildings.

The whole process, which started in Catalonia three years ago and was quite late in comparison with the rest of Europe, has brought important

changes to the planning, constructing and using of buildings.

At the present time, it is already a fact that at any promotion of housing, tertiary or public buildings, which is planned in a more or less rigorous way, energy savings or sustainability are taken into account when taking decisions, and this can influence the construction and later use of buildings.

From the point of view of tertiary or industrial sectors, those approaches have an immediate interest and a direct repercussion on expenses related to services and energy. These are measures which render profitable within periods of time which can be perfectly assumed.

In case of housing to be sold or rented, the benefits of energy savings will not go directly to the developer, but to a final buyer or to a tenant in the case of renting.

This fact implies a change in the marketing strategy of promotions, because people have already started a demand for more energy-efficient buildings, which means that the same way as an electrical appliance or a car offer their advantages which make them different and competitive, buildings offer low energy consumption. The increase in energy prices, which surely will continue to rise, spreads the concern of minimizing expenses.

The energetic certification label, effective since more than one year now, is another tool that informs the buyer of the house about the consumption and the estimated CO₂ emissions, turning the use of the house into a good one. This label allows the user to compare the expected consumption with the real one. Indeed, the difference between both makes it possible to evaluate if a good use of the house is being carried out.

In addition to this fact, we have to take into account a raising awareness that controlling consumption is essential. Enquiries done to users of houses

shows that only a few people know their energy consumption expenses. For many families, the price of the energy bills is perfectly acceptable for an average economy.

With the aim of facilitating the use of products labeled as “environmental type III” for agents of constructions, promoters and technicians, a work promoted by the Department of Environment and Housing has been carried out. This work counts with the collaboration of the Technical Architects Professional Association from Barcelona, the ESCI and the Pompeu Fabra University. Interested companies participate as well, and the work consists of the creation of an environmental products’ label, obtained by the analysis of the life cycle of thin materials produced, and their delivery at the construction site.

There are many companies that participate directly analyzing the life cycle of the manufacturing of their products that will ultimately turn into achieving the DAPc seal (DAP stands for “Declaració Ambiental de Producte de construcció”, which means “Construction Product Environmental Declaration”).

Recently, the French government has approved a law that will be put into practice in the year 2011, and will demand from all products used in France to have an environmental seal on them in order to be commercialized. All of these measures are brought about by the European Directives that gradually introduce higher demands in terms of materials used in general, and particularly, in construction matters.

Rehabilitation, a subject to be reconsidered

Up until now, we have approached the problems that have an effect on the brand new buildings, but we cannot forget the big challenge of undertaking the rehabilitation of the existing park, making it efficient in terms of energy.

If we come to analyze the constructive typologies in the park which were built in between the 50's and the 80's, we will notice that the behaviour of the buildings from an energy point of view is really bad. It was not until the year 1979 that the first policy on the matter was first published. It called for a minimum level of isolation at the closing of new plant buildings. The extent of the fulfillment of this policy is diverse, but, in any case, the park built just before the issuing of the thermal policy is the preferential objective of the energetic rehabilitation.

From the *Secretaria d'Habitatge* (the Ministry for Housing), and, to be more precise, from the public company ADIGSA, it has been several years that these kinds of rehabilitations have been generalized in the public park of the Generalitat de Catalunya. The construction plan of ADIGSA programs several improvements in its park, and one of the most important ones is the placement of insulations for external part of the buildings (skin), the closures and the decks, as well as the progressive substitution of the windows or the glasses for others with a better energetic behaviour.

Other municipal housing companies from several cities in Catalunya have undertaken this kind of rehabilitation



as well. Therefore, we can say that from the public administrations, either autonomous or municipal, this concept has been fully understood when rehabilitating buildings.

On the contrary, private rehabilitation is more reluctant to approach this kind of improvements when they raise the question of building rehabilitation.

Habitually, facades are rehabilitated, just as decks, yards and structures, but it is not common that isolation is placed in decks and facades. Therefore, and in the end, a great chance to improve the energetic efficiency of the buildings is lost.

Unfortunately, there's still an idea that a good heating system or a decent air conditioning will bring the comfort desired. This is not untrue, but the energetic bill will not stop rising. The best measure to be taken, which is also the cheapest and the most efficient is the one affecting the construction of the building itself, the one which is a part of it, and that can be called passive efficiency measure. These measures pay off in the short term, and when that happens they generate no additional expense and no maintenance is needed. Therefore, it becomes necessary to raise awareness among agents on participating in the construction process, as well as on the importance of having a well isolated facade and deck, good windows and nice protection systems against the sun for the facades.

It becomes necessary to raise every agent's conscience on participating in the constructive process

From a legislative point of view, there is still a gap, which allows us to face rehabilitations without any kind of criteria or requirement. We begin to work on the elaboration of a policy that regulates all kinds of rehabilitations in all of its diverse possibility levels.

The user: common sense

Regardless of how we construct or refurbish, the involvement of the user in making a good use of housing, technology, finding solutions to be applied in each case is essential. Now is a good moment to tell an anecdote of two buildings of the same type. One of them was of low energy consumption and the other was a normal one. After some time the consumption of both buildings was analyzed and compared, and the surprise was that the people who lived in the normal building consumed less energy than the people living in the one of low consumption.

They managed to prove that the inhabitants of the normal building were especially sensible with all issues with energy saving and made a wise use of their houses, whereas the people of the other building who probably stuck to the fact that the building was of the low energy consumption were not acting according to common sense, but they were taking advantage of the building.

The types of housing that consume less are those of our grandparents and of families with a worse economic situation. It is proved that environmental education is not easy and unnecessary, but it seems truly essential when today's technologies and resources are used.

Eventually, what is being stressed is going back to common sense and forget the typical behaviour of the New Rich. We have a long way to cover and the current economic crisis can be transformed into the opportunity if we know how to use it ■





Ecopuncture versus greenwash

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creativity &
communication

In a time of increased global consciousness of the impact that our lifestyles are having on the planet, and heightened awareness of climate change, water scarcity, food security and other critical issues, we are beginning to witness an unprecedented surge of environmental claims, from supermarket shelves, car adverts, holiday brochures, NGO campaigns and even governmental strategies. The question is just how genuine the actions behind the “green” marketing campaigns are, TV commercials, labels and websites. How as consumers do we know which product causes the least harm to the environment, as investors whose funds have been responsibly invested and as voters whose policies are truly sustainable? Having a green image is a serious business these days, and some organizations seem to invest more in the “talk” than the “walk”. This article explores the perils of greenwash, and offers tips on how seriously sustainability initiatives can use good communication to stand out from the ever greener crowd.

Keywords: greenwash, green marketing, ethical consumerism, communication, sustainability.

Ecopuncture ou lavage vert

Dans une ère marquée par la conscience croissante de l'impact que nos modes de vie ont sur la planète, la sensibilité approfondie du changement climatique, la pénurie d'eau et la sécurité alimentaire et autres questions critiques, nous avons commencé à observer une montée sans précédent des revendications climatiques, provenant des étagères des supermarchés, de la publicités des voitures, des brochures de vacances, des campagnes des ONG et même des stratégies gouvernementales. La question est de savoir la mesure dans de la véracité des actions derrière les campagnes de commercialisation « vertes », les spots publicitaires, les labels et les sites web. Comment pourrions-nous savoir, en tant que consommateurs, quel produit cause moins de dommages à l'environnement, en tant qu'investisseurs, quels fonds ont été investis avec plus de responsabilité et, en tant qu'électeurs, quelles politiques sont réellement durables ? Avoir une image verte est une affaire sérieuse de nos jours, et certaines organisations semblent investir plus dans les « mots » que dans les « faits ». Cet article explore les dangers du blanchiment vert et offre des conseils sur la façon dont les initiatives de durabilité sérieuses peuvent utiliser une bonne communication en vue de se démarquer de la mêlée verte.

Mots clés : lavage vert, marketing vert, consumérisme éthique, communication, durabilité.

Ecopuntura o lavado verde

En una época de creciente conciencia global por el impacto que nuestros estilos de vida tienen en el planeta, el cambio climático, la falta de agua, la seguridad alimentaria y otros asuntos fundamentales, estamos comenzando a ser testigos de un surgimiento sin precedentes de las demandas medioambientales, visibles en estantes de supermercado, anuncios de coches, prospectos turísticos, campañas de ONGs, e incluso en las mismas estrategias de los gobiernos. La cuestión es, ¿Cuán genuinas pueden llegar a ser las acciones que hay tras las «verdes» campañas de marketing, los anuncios de televisión, las etiquetas y las páginas Web? ¿De qué forma los consumidores sabemos qué producto causa el menor daño al medio ambiente? Por otro lado, como inversores, ¿Qué fondo ha sido invertido de forma más responsable? Y finalmente, como votantes, ¿Qué políticas son realmente sostenibles? Tener una «imagen verde» es, hoy por hoy, un buen negocio, y algunas organizaciones parecen hacer sus inversiones, pero más en palabras que en hechos. Este artículo explora los riesgos del lavado verde, y ofrece indicaciones sobre cómo las iniciativas serias de sostenibilidad pueden utilizar la buena comunicación para poder destacar dentro de la «multitud verde».

Palabras clave: fotocombustibles, fototanol, fotodiésel, sostenibilidad, certificado de sostenibilidad.

Waterless washing machines, carbon neutral holidays, biofuels, eco-lodges, sustainable carpets and organic pet food - everyone's going green these days, but how much does the recent onslaught of green marketing reflect real environmental change, and how much is this just a load of hype? The last few years have witnessed a proliferation of green marketing campaigns from both the private and the public sector and it is becoming more difficult to tell the difference between the genuine efforts and what is increasingly recognized as "greenwash". On the one hand certain companies and politicians are putting significant investment into attempts to reverse current patterns of production and consumption, take Obama's ambitious environmental strategy or companies like Toyota aiming for zero emissions. At the other end of the scale, many of the apparently "green" initiatives are really only tweaking at the edges, or worse still, taking advantage of the increasing environmental sensitivity amongst consumers as a ploy to simply sell more stuff. Greenwash entered the Oxford English dictionary in 1999 (see table 1).

However the concept was catching on in the early 1990's where images of rainforests and wildlife were used to side to side with logos of companies that had absolutely nothing to do with the environment.

Table 1. Definitions of greenwash

Oxford English Dictionary: "Disinformation disseminated by an organisation so as to present an environmentally responsible public image; ...perceived as being unfounded or intentionally misleading".

Wikipedia: "A term used to describe the perception of consumers that they are being misled by a company regarding the environmental practices of the company or the environmental benefits of a product or service. It is a deceptive use of green PR or green marketing".

Key characteristics of greenwash are the use of vague or unclear language, such as "eco-friendly", "bio" or "green", or a lack of proof to back up an environmental claim, such as the % of ingredients that come from a certified organic source, or the level of CO₂. Some companies attempt to justify their green image with the use of a label, however if this is merely self-certification and does not have a trusted third party endorsement (e.g. European Eco-label or Forestry Stewardship Council), it does not do much to back up the claim. Another aspect of greenwash is the use of incredible claims such as "CO₂ free cheese", eco-jargon such as "zero carbon city", or suggestive images indicating unjustified environmental credentials. See Shell's publicity campaign "Don't throw anything away, there is no away" which was accompanied by images of flowers com-



BP has received numerous accusations of greenwash, particularly due to discrepancy between investment in green marketing versus investment in renewable energy. BP ©© Vlad Lazerian

ⁱ Concise Oxford English Dictionary, 10th Edition.

ⁱⁱ <http://en.wikipedia.org/wiki/Greenwash>.

ing out of smokestacks as an example of the use of suggestive images. Table 2 sums up some of the key characteristics of greenwash.

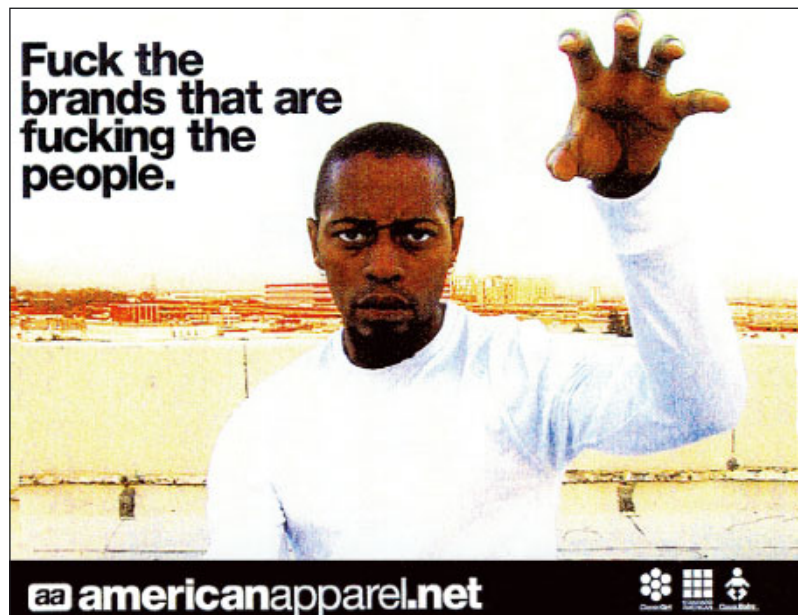
Table 2. Seven sins of Greenwash

1. **Hidden trade-offs:** marketing one environmental attribute whilst other practices go unchecked e.g. energy efficient light bulbs that produce hazardous waste or organic T-shirts made in sweat shops.
2. **Lack of Proof:** claims to be organic or resource efficient without verifiable certification.
3. **Vagueness:** unclear, meaningless language e.g. green, climate-friendly or eco.
4. **Irrelevance:** boasting attributes which are legal obligations, e.g. CFC-free.
5. **False claims:** pretending to be certified by an internationally recognized environmental standard, or using company own green label "eco-certified".
6. **Suggestive images:** misleading images indicating an unjustified environmental attribute e.g. videos of pristine rainforest for a Palm Oil industry.
7. **Exaggeration:** overstated environmental messages e.g. reduce your carbon footprint by going on holiday to an eco-resort in Australia, or clean the air as you drive the new hybrid vehicle.

Adapted from TerraChoice study in the US which found that more than 99% of 1,018 common consumer products randomly surveyed for the study were guilty of greenwashing.

Planes, trains and automobiles

It is no coincidence that the automobile industry and the energy sector, major contributors to climate change, have taken particular interest in developing sustainable images in response to increased awareness of the environmental impacts resulting from energy use and transport. In 2004 BP spent \$200 million on a public relations and



An example of bold communication for sustainability from a brand based on sustainable work ethics. In line with the zero outsourcing policy all manufacturing takes place in the US. American Apparel

advertising campaign to rebrand themselves as "Beyond Petroleum" - a larger investment than the entire alternative energy budget that same year. Many energy companies are now investing in their environmental reputation, partly as a protection mechanism against criticism from increasingly powerful and well informed civil society groups, or perhaps in response to the greater concern for sustainability issues from the consumer. "It's not easy being green...", a recent advert for Fords latest SUV model features Kermit the Frog cycling through the forest, lamenting how hard it is to be green, until he comes across the new Ford Escape Hybrid, and sighs: "I guess it is easy being green". In fact, being "green" these days is so easy that it is difficult to find any car company that is not. Even Land Rover is branding itself as a sustainable company, with its ambitious carbon offset program. However, scrape behind the green "sheen" to discover a different story; certain Ford models do now not even meet the environmental standards set

by China, and despite the offsetting, Land Rover still sells vehicles with CO₂ emissions considerably higher (between 179 g and 376 g per km) than the EU Directive of 130 g/km.

The perils of greenwash

The advertising authorities are starting to take notice of greenwash. Australia has recently launched the “*Green Marketing and Trade Practices Act*”, tying advice to existing legislation on Trade Practices. The French government has published a charter which gives a jury of advertising professionals the right to impose fines and withdraw environmentally misleading campaignsⁱⁱⁱ and the US is also in the process of revising its Green Claims Code. In the 2008 Environmental Claims Survey, the UK’s Advertising Standards Authority claimed that complaints about environmental claims more than doubled the ones of the previous year with 556 complaints about 408 ads. This year Royal Dutch Shell violated advertising rules by claiming in a newspaper ad that two oil projects in Canada and the U.S. involved sustainable forms of energy. Likewise, Lexus was obliged to remove a national press advertising campaign for its new hybrid model on the basis of its misleading claim; “*perfect for today’s climate (and tomorrow’s) ... driving the world’s first luxury hybrid SUV makes environmental, and economic, sense*”.

Communication for sustainability

Aside from the threat of advertising regulation, consumer cynicism and NGO criticism, the greatest potential threat that greenwash represents is the harm it can do to genuine sustainability efforts, acting as a distraction to the initiatives which do consider sustainability as the end, not the means. A good example of the latter is Marks and Spencers’ “*Look behind the label*”



Transparency and honesty in internal and external communications are essential for good communications for sustainability

campaign which includes a message to turn your washing machine “*Back to 30*”, here using the label not only to communicate product information, but also as a communications vehicle for the company sustainability strategy, “*Plan A - because there is no Plan B*”. The same company also uses the Marine Stewardship Council to certify that its fish has been harvested from sustainable sources.

Transparency and honesty in internal and external communications are essential for good communications for sustainability; here recognized labels and sustainability reporting systems are useful strategies. If employees are involved in the monitoring of the organization’s energy efficiency system, tracing the origin of product ingredients, or checking up and reporting on suppliers labour conditions they are much more likely to be able to effectively communicate responsible business practices externally. Imagine selling a water saving device without having the same device installed within your offices.

ⁱⁱⁱ *Charte d’engagement et d’objectifs pour une publicité eco-responsible*, www.developpement-durable.gouv.fr

To stimulate the behavior change that sustainability demands, information needs to be clear, precise and accurately targeted to the audience, in other words, “ecopuncture” rather than “greenwash”. Take the example of a stand at the Water and Sustainable Development EXPO held in Zaragoza which used the message; “*Did you know you can drink the water from the cistern?*” For the target audience (the general public) this message was unclear, and did not convey the desired message to promote more efficient water use. For the NGOs delivering the message it may have been strikingly obvious. By contrast, compare the slogan used by Stonyfield Farm, the world’s leading organic yoghurt manufacturer, to achieve the same result; “*Go to the source. Find out where your water comes from and what you can do to protect it*”. See table 3 for further tips on Communication for Sustainability. Serious sustainability campaigns, whether from governments, NGOs or businesses are often promoting a serious U-turn in the way we currently operate, advocating drastic changes in consumption patterns and production processes.

To achieve this change gentle persuasions are simply not enough, boldness, vision and creativity are needed to get people on board. Take for example American Apparel’s campaign “*Fuck the brands that are fucking the people*”. In a climate where business leaders and governments appear to be finally putting the environment high up on the agenda, sustainability initiatives need to take their communication more seriously than ever before - not just to stand out from the crowd, and as protection against accusations of greenwashing, but ultimately to achieve the radical transformation of society that our future depends on.

Table 3. Ten tips on Communication for Sustainability

1. **Ecopuncture:** research your audience and target them with specific, meaningful messages.
2. **Walk the talk:** make sure internal practices are coherent with external communications, and be consistent.
3. **Back up your claim:** use third party endorsed and trusted labels & back it up with integrated sustainability reporting systems.
4. **Be technically correct:** get your figures straight, use scientifically proven evidence and put your messages into context.
5. **Use specific, measurable targets:** set ambitious goals but be sure to measure and regularly communicate progress.
6. **Be bold be creative:** take risks and say what needs to be said, using punchy (but not simplistic) messages.
7. **Understand the issues:** analyze the problem from different angles (temporal, systemic, economic, psychological, social etc.) before defining your message.
8. **Rethink communication channels:** get to know your audience, use social networks, product placement, websites, campaigns, heroes.
9. **Make it personal:** show people how they can make a difference as individuals, use humor and personal stories.
10. **Innovate:** create sustainability success, think hard about how to do things differently!

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«Bio», the Italian way to go organic

« Bio », produits organiques à l'italienne

En Italie les ventes des produits organiques continuent à augmenter et ont atteint 1,9 milliard d'Euro en 2008, soit le 2 pourcent des ventes d'aliments en Italie. Actuellement, l'Italie dispose du plus grand nombre d'exploitations organiques (25 pourcent du total de l'Union Européenne) et de terrains (17 pourcent). Entre 1990 et 2007, l'agriculture organique en Italie a augmenté de 13 mille hectares à 1,2 millions hectares (9 pourcent des terres agricoles utilisées) et de 1,500 à 50,276 exploitations agricoles. Les nouveaux marchés et les aides au financement de la Communauté Européenne sont les principaux moteurs d'une telle croissance qui pourra persister dans le temps, malgré que le secteur connaîtra de nouveaux défis compliqués, qui seront parfois au-delà de son contrôle.

Mots clés : agriculture, organique, Italie, demande, effets, croissance, marché, opportunités, future, risques.

«Bio», productos orgánicos a la italiana

En Italia, las ventas de productos orgánicos continúan creciendo y han alcanzado la cifra de 1,9 billones de Euros en 2008, representando aproximadamente el 2% de las ventas de alimentos de todo el país. Actualmente, Italia tiene el mayor número de holdings orgánicos (25% del total de la UE) y la mayor área (17%). Desde 1990 hasta el 2007, la agricultura orgánica en Italia se ha expandido de 13.000 hectáreas a 1,2 millones de hectáreas (9% del Área Útil Agrícola) y de 1.500 a 50.276 holdings. Las oportunidades de Mercado y el fondo de ayuda de la CE son los motores básicos de este crecimiento, que puede incluso llegar a persistir, a pesar de que el sector debe enfrentarse a nuevos y complejos retos, algunos de los cuales escapan a su control.

Palabras clave: agricultura, orgánico, Italia, demanda, efectos, crecimiento, mercado, oportunidades, futuro, riesgos.

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In Italy, organic product sales continue to grow and reached 1.9 billion Euros in 2008, representing approximately 2 percent of Italy's food sales. Currently, Italy has the largest number of organic holdings (25 percent of the EU total) and area (17 percent). From 1990 to 2007, organic farming in Italy has expanded from 13 thousand hectares to 1.2 million hectares (9 percent of the Utilised Agricultural Area) and from 1,500 to 50,276 holdings. Market opportunities and EC aid funding are main drivers of such growth, which may even persist though the sector has to face new and complex challenges, some of them beyond its control.

Keywords: agriculture, organic, Italy, demand, effects, growth, market, opportunities, future, risks.

1. "Organic farming: Good for nature, good for me"

Alice, 8, and Emanuele, 11, are pleased with the food menu served at the refectory of their Montessori school in Rome. The entrees are «bio», Italian epithet for organic food. Since they were told organic milk helps beat infections and has more health benefits than milk produced with pesticides, chemical fertilizers or antibiotics, the two kids demand their mamma to buy bio at the supermarket. The task is not demanding, as more and more groceries across the city have special shelves offering their own lines of organic food: vegetables, fruits, grains, meat, eggs, dairy items, and baby food, tea, coffee, other beverages. Even frozen pizzas and instant dinners.

A survey carried out by ISMEA (2009), a research institute of the Ministry of Agriculture, reveals organic product sales continue to grow in Italy and reached 1.92 billion Euros in 2008, an average Italian expense of 32 Euros per year. According to ISMEA findings, organic food sales now represent approximately 2 percent of Italy's food sales. In 2008, the organic sector growth was the utmost one (+5,4%) within the global food industry (+4,4%). The fast-growing segments of the bio market were fruits and vegetables (+20%), baby food products (+16%), and—not surprisingly—pasta (+14%).



Box 1

Worldwide sales of organic products have more than doubled since 2001. In 2007, market of organic products growth rate was about 19 percent and market is expected to reach € 54.3 billion by the end of 2010 (RNCOS, 2009). The demand is concentrated in North America and Europe, these two regions contributed around 96 percent of global revenues in 2007. As far as EU and North America markets are concerned, the demand for all organic product categories exceeds supply. In the EU, sales are predominantly occurring in Germany, the United Kingdom, Italy and France. These four countries account for 75 percent of European turnover.

According to
ISMEA
findings,
organic food
sales now
represent
approximately
2 percent of
Italy's food
sales

According to Mingozi and Bertino (2009), school refectories serving organic entrees boost up to 791 in 2008. Every day about 980 thousand organic meals are served in school cafeterias, from nursery to middle schools. Indeed, specific regional rules require municipalities and hospitals to use daily some organic in their catering services. Many regional governments support municipalities that adopt organic catering with a considerable grant (up to 30% of the total cost). In Emilia Romagna, a regional ruling imposes 100% organic diet for nursery and primary schools, and at least 35% in advanced schools, universities and hospitals. Other products have to be traditional and typical of the region. There are farmers and cooperatives that deliver organic products directly to customers' homes, grouped in «gruppi di acquisto». In the gorgeous Piazza delle Erbe, Padua, farmers bring their organic produce to the historic daily street-market.

"It's definitely more business every year", says Franco Zecchinato, a well-known «bio» producer and seller of the Piazza, of "El Tamiso" Organic Farmers Cooperative. "It's an under-saturated market. Concerns about the environment as well as fertiliser and pesticide waste products, have created a group of faithful customers, confident that the food they buy is both safer and healthier" he says. In Castel di Guido,

outdoor Rome, alongside the ancient road Aurelia, collective public farm sells organic beef meat every month's first Saturday mornings. People make a special trip to find their favorites, plus they enjoy a countryside break.

2. Switching from conventional to organic farming

The growing use of organic labels and the expansion of European consumer demand for organic products (see Box 1) have encouraged many farmers to switch from conventional to organic practices. Since the beginning of the 1990s organic farming has rapidly developed in almost all European countries and currently about 25 percent of the world's organic land is in EU: for the whole EU-27, about 6.8 million hectares (3.7% of the agricultural area) are managed organically by more than 200,000 farms. Italy has the largest number of organic holdings (25 percent of the EU total) and area (17 percent). From 1990 to 2007, Italy's organic farming has expanded from 13,153 to 1,150,253 hectares and from 1,500 to 50,276 holdings. In 2007, production of grass and fodder was the

most important use of organic land (about 55 percent of the total). Cereals appeared the most important organic crop (241,430 ha), followed by olive (109,992 ha), grape (36,684 ha) and citrus fruits (22,062 ha). The area of organically farmed land to produce vegetables, melons and strawberries is increasing rapidly and currently amounts to 39,803 ha (ISPRA, in press).

Organically farmed land represents 9 percent of Italy's utilised agricultural area (it was 0,09 percent in 1990). Considering the efficacy of organic farming to make agriculture sustainable while conserving soil, water, energy, and biological resources, the positive feedbacks of organic farming in Italy are really significant, in terms of soil quality (Marinari et al., 2006) and carbon sequestration (Lagomarsino et al., 2009), reduction of fossil energy inputs, GHG emissions (Sartori et al., 2005; La Rosa et al., 2008), lessening of soil erosion (Gomez et al., 2008), increase of biodiversity (Taylor and Morecroft, 2009) and—of course—cut-back of fertiliser pesticide use.

Obviously the rapid growth in organic farming may not be explained merely by market opportunities: a key

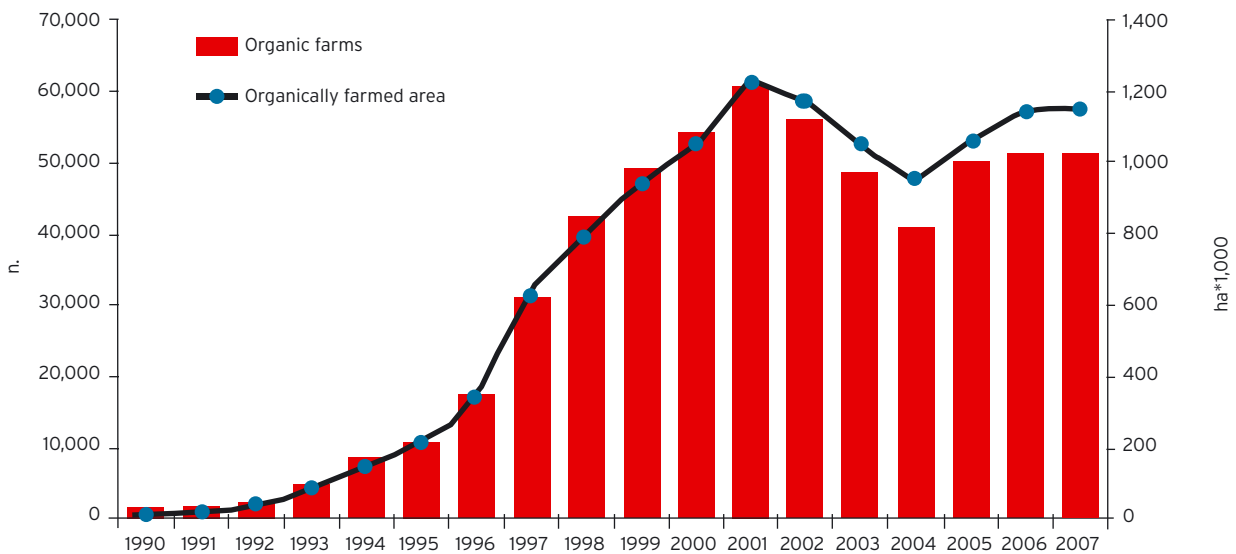


Figure 1. Trend of organic farming in Italy, from 1990 to 2007

driver of success of organic food is subsidies to farmers offered by the European Commission (EC) agricultural policy. A proof of the dependency of the sector on public aids in Figure 1: in the period 2002-2004, after years of regular progressing, both the number of organic holdings and lands registered a stagnation. As in some regions aids were interrupted for bureaucratic reasons, many farms left the organic management scheme to go back to the conventional system. From 2005, when aids were available again, figures for organic farming went up again.

Until the mid-1980s, EC agriculture policy encouraged the intensification of agricultural practices and did not take into account water quality or any other environmental inferences. The EC environmental policy, on the other hand, hardly ever focused on the negative side effects of agriculture. As a result, misuse of pesticides and improper application of fertilizers and livestock manure are considered the major sources of water pollution and in some areas a threat to drinking water supplies (see Box 2). In the period 1992-1996, fundamental reforms were introduced in the Common Agriculture Policy with the aim to reduce support prices for a range of agricultural products. An agro-environmental package was also included, intended to improve more environmentally friendly methods of production. Subsidies were offered to farmers to decrease fertilizer and pesticide use, reduce livestock density, switch to more extensive forms of production, including organic farming. Support for organic farming included grants under the EU's rural development programs, legal protection under the recently revised EU regulation on organic farming (since 1992) and the launch of the European Action Plan on Organic Food and Farming (June 2004). Research into organic agriculture is also supported, both at a country and EU level, reaching at least 65 million Euros in 2006 (Willer *et al.*, 2008).



Box 2

According to OECD (2008) statistics, the gross nitrogen balance¹ in Italy in the period 2002-2004 was estimated to be 39 kg per hectare (ha)², showing an increase by 15% between 1990-92 and 2002-04. The gross phosphorus balance over the same period decrease by 22%, from 14 to 11 kg P/ha. In 2006 about 820,000 tonnes of nitrogen, 360,000 tonnes of phosphorus and 290,000 tonnes of potassium (expressed, respectively as N, P₂O₅ and K₂O) were spread over Italy's agricultural lands (ISPRA, in press). While overall OECD (2008) pesticide use has declined by 5% over the period 2001-2003, in Italy was registered an increase by 8% (from 79,844 to 85,920 tonnes of active ingredients). The Yearbook of Environmental Data (ISPRA, in press) reveals that in 2006 over 156,000 tonnes of pesticides were sprayed on Italian farmland. Referring to single crop, average use of pesticides was equal to 15,6 kg/ha for grape; 3.6 kg/ha for potato; 3.5 kg/ha per olive. About 1.2 percent of fruits and vegetables contain pesticides above the ruled limits.

Around 57 percent of freshwater contains residues of pesticides. Drinking pesticide-contaminated water was 37 percent of water monitored; 10 percent of all groundwater in the country contains pesticide traces exceeding EU standards for safety (ISPRA, in press).

¹ The gross nutrient balance is calculated as the difference between the total quantity of nutrient input entering an agricultural system, and the quantity of nutrient outputs leaving the system.

² The EU's highest was 229 kg/ha in the Netherlands, six times higher than in the United States.

3. The future of organic farming in Italy

"In theory—says Nino Paparella, President of ICEA, Italy's Institute for Ethical and Environmental Certification—there is still a huge potential for expansion in organic market". "Think about market segments such as restaurants, public catering, vending machines in schools and offices. Organic meat market is expected to grow rapidly, because of consumers' concerns on recurrent problems of meat produces, like BSE, antibiotics, aflatoxins, hormones, etcetera" he argues.

Azucena and de Magistris (2008) consider a greater information and promotion on beneficial effects of organic food products—especially in the South of Italy where organic is not so popular as in the rest of the country—is crucial to expand the demand. For them, other important factors are clarity and transparency. In this regard, a positive step forward is represented by the introduction of new EU Regulation on organic production and labelling, which improves clarity for both organic farmers and consumers. The Regulation—effective since 1st January 2009—sets out, *inter alia*, the requirement that at least 95 percent of the agricultural ingredients of the final product have to be organic and the obligation for producers of organic food in the EU to use the EU organic logo for it to be labelled as such (Figure 2).

Figure 2. The EU-logo made obligatory for all organic pre-packaged food produced within the Community The Council Regulation (EC) No 834/2007 on organic production and labelling of organic products. The EU logo may be used on a voluntary basis in the case of non pre-packaged organic products produced within the Community or any organic products imported from third countries



Needless to say, the sector has to face important setbacks.

The food crisis, the boom in liquid biofuels and the deepening global recession are putting heavy pressure on the world's food system and having significant repercussions on agricultural markets (FAO, 2008), including the organic sector. Last year fewer Italian farmers started the laborious transition to «bio» because they could get record prices for conventional durum wheat, on the contrary current wheat price has dropped drastically.

Another important question is how shoppers will react in times of global economic crisis, and if they will cut back on organic food or will continue to buy organic and quit smoking or cut back superfluous recreational spending.

At the moment organic food is typically 10 percent (milk, for example) to 100 percent (meat) more expensive than a conventional counterpart. Higher prices obtained by producers, wholesalers, and retailers for organic commodities compared to their conventional counterparts provide a pecuniary perverse incentive for the unscrupulous to mislabel and pass off conventionally grown produce as organic. Now organic certification in Italy relies on a well-organized system based on visits to farmers and processors to ensure they meet the required standards. In 2008, 20 officially recognised inspection agencies operated 62,067 inspections and tested 5,442 samples of soil and vegetables. Yet, a system like this, even if necessary, inexorably raises costs of organic products and may not be sufficient to make out food fraudulently labelled as organic. "In the past – Paparella asserts – we focused too much on inspections and examinations, instead of concentrating on education and training of farmers". In this regard the role of research is key. Alison Bateman and colleagues (2007) at the University of

East Anglia have developed a new test that can indicate whether a crop was grown with synthetic fertilisers. Synthetic nitrogen fertilisers, forbidden for use in organic agriculture, can leave a characteristic 'nitrogen signature' that can be detected by mass spectrometry. The test could be used routinely to supplement the organic certification system, or could be used as extra evidence where mislabelling or fraud is suspected.

As a demand for organic produces expand, retail companies with a strong market position focusing on the organic segments tend to become the low-price leader in organics. And low price offered by big retailers may force health and organic food stores out of business and erode profit margins of organic growers.

What may be most worrying for the sector is that organic food is being openly accused of selling its initial soul to the same industrial food system that has given the public pesticides and other environmental and health problems; to giant corporations and large landlords whose commitment is solely to vast profits and to have access to EU funding.

A large farmers' association started to be unenthusiastic about organic farming and to have vision of Italian farming of fewer, larger, more "efficient" holdings—which may mean the end of the small farms that have pioneered organic food—and lead to more pressure being put on certification bodies to erode standards to keep prices down. The association is more in favour of local products than organic products *tout court*, which could have travelled great, polluting distances and it is over-packaged and not fresh, or may have been grown by people earning a meagre money. According to a recent survey of Coldiretti, the country's largest farmers' association, two Italian consumers out of three are willing to spend more for an organic product, if local.

With continuing consumer concerns about food quality, animal welfare and the environmental issues in farming, the outlook for continuing growth of organic production is bright, but not as it in was the past decade and the form of the growth and at what scale is less than certain. It depends very much on many factors, some of which are beyond organic sector' control.

Subsidy support for farmers is essential. The justification for maintaining the current level of aid are the beneficial socio-economic and ecological impacts of organic farming. A way for us citizens to pay the environmental services they provide to the community.



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