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Household Sustainable Consumption: An evaluation of environmental awareness materials

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Abstract

European Union (EU) has been putting increasing emphasis on sustainable use and management of natural resources, especially since the adoption in 2001 of the EU Sustainable Development Strategy and the Sixth Environment Action Programme. Some objectives and priority areas for action are the achievement of a significant overall reduction in the volumes of waste generated through waste prevention initiatives, better resource exploitation efficiency and a shift towards more sustainable production and consumption patterns. There is wide global recognition that unsustainable patterns of consumption have serious social and environmental impacts. ‘Changing consumption patterns’, as identified by Chapter 4 of Agenda 21, remains a challenging, yet significant component of the drive to achieve sustainable development. Sustainable consumption does not mean about consuming less, it is about consuming differently, consuming efficiently, and having an improved quality of life. It also means sharing between the rich and the poor. The change of these consumption patterns could only be achieved through the use of correct and efficient environmental awareness/education campaigns. The purpose of the study is to conduct a state of the art of environmental awareness materials related with European household sustainable consumption. The search materials were compared and evaluated in terms of: aims; type of materials; target public; applicability and contents. The results of our research demonstrated that internet is a powerful tool and can contribute to the awareness of the general public about these issues. The problem of internet downloaded materials is the lack of their quality evaluation before them as available on the web. Weaknesses were found in terms of technical, scientific quality and their ability for learning-teaching. Some of them are very rudimentary,

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contributing little to the general public's awareness. Also their interactivity could be better if taking into account the currently power of web base tools.

Key-words: Household Sustainable Consumption, Environmental Awareness; Web Materials

Introduction

The removal of trade barriers across the world and the process of globalisation and liberalisation of markets have given European consumers access to many products from all over the world at all times. In particular, the development of EU's internal market, with the introduction of the Euro, has made trade between European countries easier. Consumers in the EU have gained access to more goods and services in a larger and more competitive market (Lieshout et al. 2004).

Promoting a shift to more sustainable consumption requires increasing both the supply of and demand for sustainable products. The challenge is to develop policies to induce both producers and consumers - as well as marketers, distributors and retailers - to take responsibility for the environmental and social impacts of the products and services that they design, produce, use and dispose of. Changes are required in both "hardware" – the products and infrastructure that constrain consumer choice, and "software" – the culture and values underlying consumer behaviour. The focus here is on reducing the negative environmental and social effects that result from current consumption patterns. This involves persuading consumers to choose more sustainable products and services, as well as increasing the availability of such products and services. Furthermore, consumer products and services are purchased not only by households, but also by businesses and public institutions, whose large volumes of purchasing give them greater power to change markets.

There are some definitions about sustainable consumption. According to the World Business Council for Sustainable Development: "Sustainable production and consumption involves business, government, communities and households contributing to environmental quality through the efficient production and use of natural resources, the minimization of wastes, and the optimization of products and services (WBCSD 1996)". However, this is too narrow a definition since it falls into the trap of equating sustainable development only with

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environmental quality. We argue that sustainable development (because it is a “development” concept) should focus on quality of life and that a better definition might be that sustainable production and consumption is: “...the use of goods and services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations (Norwegian Ministry of the Environment 1994)”. Salim (1994) agrees with this approach because it emphasizes future generations as well as present ones and goes further in suggesting that: “Sustainable consumption implies that the consumption of current generations as well as future generations improves in quality. Such a concept of consumption requires the optimization of consumption subject to maintaining services and quality of resources and the environment over time”. The definition of UNEP, Sustainable Consumption (SC) is about finding workable solutions to imbalances – social and environmental – through a more responsible behaviour from everyone. In particular, SC is linked to production and distribution, use and disposal of products and services and provides the means to rethink their lifecycle. The aim is to ensure that the basic needs of the entire global community are met, excess is reduced and environmental damage is avoided (UNEP 2005a).

Any definition of SC highlights how consuming less is often a priority, but not always. Consuming differently and efficiently is the key challenge. In many cases, redistributing the chance to consume is what is needed (UNEP 2005a). These definitions remain open to different interpretations. This is appropriate because the assessment of what is sustainable is site- and problem-specific, and depends on social and political decisions of acceptable levels of risk and substitution between natural capital and man-made, human and social capital. Sustainable consumption is also defined as a function of the time within which environmental pressures must be evaluated, which can be a question of a few years or many decades. As a result, sustainable consumption is a dynamic concept that indicates the direction of change as desired or required; it can evolve as new information is gathered and political preferences are established. Where ecological limits can be established, sustainable consumption can be linked to specific targets (*e.g.* for CO₂ emissions, water consumption) (Welford 2000).

Household consumption forms an important part of the production-consumption chain as it is consumers who make the final choice of which goods and services to consume. European

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households affect the environment through their day-to-day choices of which goods and services to buy and how to use them. However, we also affect the environment through our choices of where to live, where to work, how to use leisure time and how to travel. Such choices are made within certain boundaries conditioned by historical developments and past policy decisions, for example on urban planning, transport infrastructure and available housing. Even though the environmental pressures caused by each household are small compared with those caused by production activities, the combination of millions of European households is a major contributor to environmental problems such as climate change, air pollution, water pollution, land use and waste generation (OECD 2002).

To understand consumption patterns also means understanding how individuals make choices. At an individual level our consumption patterns are shaped by our needs, abilities and opportunities. Consumption patterns are also shaped by a desire to identify with groups that define themselves in a variety of ways. An important factor that shapes our opportunity to consume is the goods and services supplied by the producers and how these are advertised.

Economic and household consumption growths are closely linked and have followed similar patterns. In other words, as we become wealthier we also in most cases consume more. The projected economic growth of 2.4 % per year in the EU-25 between 2000 and 2030 will be accompanied by similar growth in consumption (EEA 2005).

Reducing the environmental impacts of household consumption requires a combination of different policy instruments and a multi-stakeholder approach including public policy, market innovation, Non Governmental Organizations (NGO) mobilization of consumer groups, and voluntary initiatives by consumers themselves (OECD 2002).

Household decisions are also influenced by government policy and institutional arrangements in other areas of public planning, including macroeconomic fiscal and monetary policies intended to influence savings or stimulate consumption (e.g. of consumer durables, housing, real estate), land-use planning, technology policy, etc. Government failure to define sustainability objectives and to adequately co-ordinate policies across economic sectors can result in negative spill-over effects on the environment (OECD 2002).

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Social instruments can broadly be characterized as influencing consumer knowledge and willingness to act in favour of the environment. OECD countries use different measures to make consumers aware of how they could adopt more sustainable lifestyles: information dissemination on specific household topics (energy or water conservation), eco-labelling schemes, public awareness campaigns, open forum debate and discussion, voluntary co-ordinated consumer initiatives, etc. Information can be a powerful tool for promoting more sustainable household consumption patterns. Nearly every government, private sector, or NGO initiative for the environment calls for a better informed and more active public. However, there are a number of barriers in effectively providing information to consumers and linking this information to action. These barriers are related to the growing volume and complexity of environmental information available to consumers, consumer scepticism vis-à-vis the credibility of most information sources, and "free-rider" decision-making dilemmas - all in the context of a broader information and media environment that generally encourages indiscriminate consumption (OECD 2002). Policy initiatives for changing consumer behaviour include information-based and education-related instruments, as well as economic incentives. Labelling and voluntary environmental product declarations (EPDs) are becoming common instruments in many countries, in assisting consumers to make informed choices. Many labels, such as the Energy Star, address a single aspect or life-cycle phase of a product, which limits their impact, but also makes them simple to understand. Highly technical or complex information may be of limited use to the average consumer. The existence of a variety of labels can be confusing for consumers and guidance from policy makers might be needed (e.g. the Sustainable Shopping Basket of Germany), (UNEP 2005b)

Nowadays the internet is a powerful tool to disseminate information where materials about household sustainable consumption can be available to promote awareness/educate the general public and families in particular. The problem remains in the quality of those materials and the lack of studies to evaluate if in anyway those materials contribute to induce individual's awareness about household sustainable consumption. The main purpose of the study is to conduct a state of the art about environmental awareness materials available on the web, related with European household sustainable consumption and to conduct a qualitative evaluation of their quality.

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Methodology

A European web survey was conducted aiming to characterize available awareness materials about household sustainable consumption. A search on “Sustainable consumption” key word was conducted on the web in English, Portuguese, Spanish and French languages, from May to November of 2006. Laws, political documents or material not to be used within the family environment (e.g. teaching materials) were not considered on the survey, as well as materials that were not available on the web. All type of awareness materials like guides, quizzes, videos, games, websites, reports, pamphlets, didactic exercise-book, e-conferences were considered. Each search materials were characterized in terms of type, name, themes, author organization, scope level (country, Europe, international), general aims, description, target public, and web address. A comparison and evaluation of these materials in terms of household sustainable consumption awareness was performed taking into account the following classification items: i) Technical – technical and scientific quality of the materials; ii) Values – environmental values of the materials, and how they can lead to environmental awareness; iii) Pedagogy – learning and teaching quality of the materials; iv) Interactivity – quality in terms of materials user interactivity; v) Transversally – quality in terms of materials themes transversally. Each material was classified in three degrees (1. fair, 2. medium and 3. high) for all items. A global median score was calculated for each item according to the previous qualitative expert knowledge assessment.

Results and discussion

Materials characterization

The searched materials on sustainable consumption and their characterizations are listed in Table A1 (see in Apendix). The main types of materials found are games (25 %) and websites (21 %) compared to e-conferences, reports and movies which only represent 2 % each (Fig. 1). It is important to say that technical reports not written directly to the general public were not included in our survey. Movies work very well as an environmental awareness type of material and are easily available on the market, but they have strong memory requirements and are difficult to download.

Sustainable consumption is a broad area, so although the main search materials are about sustainable consumption in general (65 %, Fig. 2), other more specific themes were also found, like water, waste, energy, garden and transportation saving (12 %) or home chemical products, eco-labels and sustainable construction (2 % each). Fair trade (12 % search materials, Fig. 2) is an emerging issue, being an increasing market within families. Nowadays there are about 3000 world shops of fair trade, with a 20 % increase rate between 1984 and 1994 (Reviravolta 2006). Nevertheless special care must be taken to theme classification, since some materials are classified in the website, for example as responsible consumption, but in fact they are about toys reuse (see nº 9 in Table A1).

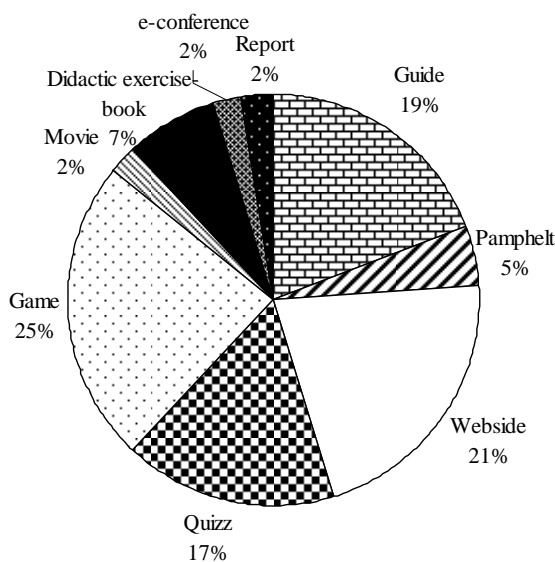


Figure 1 - Types of sustainable consumption awareness materials searched on the web.

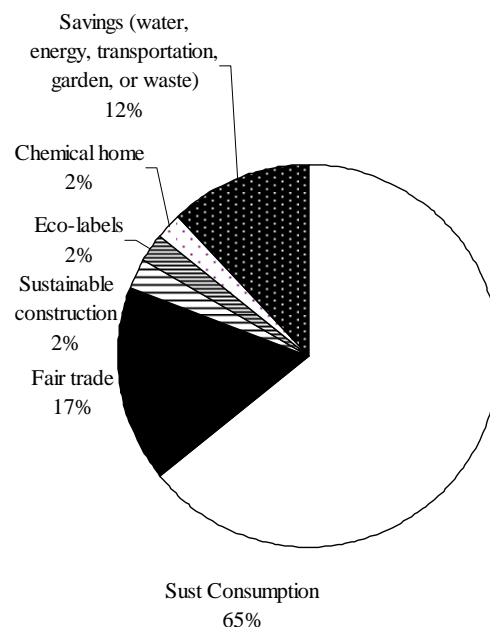


Figure 2 - Themes of the sustainable consumption awareness materials searched on the web.

Most of the searched materials are prepared by local organizations (69 % country scope level, Table A1), followed by international and European organizations (19 % and 12 %, respectively). National consumers associations (e.g. France, Belgium, Portugal) or NGO are the main type of organizations which develop the materials.

Only 5 % of the searched materials have the family as specific target-public, compared to 40 % focused on the general public. Children plus young people (40 and 14 % target public, Table A1) are the main target public of the searched materials. Most communications aiming at the adoption of a consumerist lifestyle are addressed to young people, the most delicate age

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for the development as a person. Therefore, for their potential as consumer and vulnerability to society pressure, youth are a key target for sustainable consumption and production policies to reach with information and capacity building (UNEP 2006). Educational programmes in schools can play an important role in raising public awareness of the impacts of consumption patterns. Integration of sustainability issues into formal and informal education has already started in some countries. Support from media and civil society organisations (especially consumer organisations) are crucial for the success of public information campaigns and responsible marketing. At the Marrakech Meeting, participants considered them useful for implementing sustainable consumption policies, for integrating sustainable consumption considerations in consumer protection policies, and as a starting point to build new partnerships with civil society (UNEP 2005b).

Materials evaluation

About 60 % of the materials were classified as good in terms of technical and scientific contents; nevertheless there are 3 % of the materials that were classified as fair (Fig. 3). Some of these materials (e.g. nº 31 and 32, Table 1), were classified as good in terms of interactivity since they are games which the user can easily play. The problem consists in the fact that the contents have wrong concepts.

Table 1 - Household sustainable consumption awareness materials evaluation.

| | Name | Technical | Values | Pedagogy | Interactivity | Transversally | Global (median) |
|----|--|-----------|--------|----------|---------------|---------------|-----------------|
| 1 | Guide Shopping fair and Green | ☺ | ☺ | ☹ | ☹ | ☺ | ☺ |
| 2 | Recourse Kit on sustainable consumption & production | ☺ | ☺ | ☹ | ☹ | ☺ | ☺ |
| 3 | Pamphlet Washright | ☺ | ☺ | ☺ | ☹ | ☹ | ☺ |
| 4 | Website The Chemical house | ☺ | ☺ | ☺ | ☹ | ☹ | ☺ |
| 5 | Website Ozonalia | ☹ | ☺ | ☺ | ☹ | ☹ | ☹ |
| 6 | Quiz ¿Eres un consumidor responsable? | ☹ | ☺ | ☹ | ☺ | ☹ | ☹ |
| 7 | Game <i>Compro luego penso</i> | ☹ | ☺ | ☺ | ☺ | ☺ | ☺ |
| 8 | Game <i>Los 4x4 insolidarios</i> | ☹ | ☹ | ☹ | ☹ | ☹ | ☹ |
| 9 | Game <i>Los juegetes, ¿se tienen que comprar?</i> | ☹ | ☺ | ☹ | ☹ | ☹ | ☹ |
| 10 | Game <i>El patalon viagero</i> | ☹ | ☺ | ☹ | ☹ | ☹ | ☹ |
| 11 | Game <i>Papel reciclado</i> | ☺ | ☹ | ☹ | ☹ | ☹ | ☹ |
| 12 | Game <i>¿Cuánto sabes de comercio justo?</i> | ☹ | ☺ | ☹ | ☹ | ☹ | ☹ |

In: Azeiteiro, U., Gonçalves, F., Pereira, R., Pereira, M., Filho, W. L., Morgado, F. (Ed.) *Science and Environmental Education*. Peter Lang Ed. 2008 305 a 331 pp.

| | Name | Technical | Values | Pedagogy | Interactivity | Transversally | Global (median) |
|----|--|-----------|--------|----------|---------------|---------------|-----------------|
| 13 | Game <i>Sopa de letras</i> | ☹ | ☹ | ☹ | ☹ | ☹ | ☹ |
| 14 | Didactic exercise-book <i>Cuaderno Didáctico UNICEF- Comité Regional de Murcia</i> | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ |
| 15 | Didactic exercise-book <i>Unidades didáticas</i> | ☺ | ☺ | ☺ | ☹ | ☺ | ☺ |
| 16 | Didactic exercise-book <i>Cuaderno Didáctico Castilla-La Mancha</i> | ☺ | ☺ | ☺ | ☹ | ☺ | ☺ |
| 17 | e-conference sustainable production and consumption | ☺ | ☹ | ☺ | ☹ | ☺ | ☹ |
| 18 | Guide <i>Idea Sana – Consumo sostenible</i> | ☺ | ☺ | ☺ | ☹ | ☺ | ☺ |
| 19 | Quizz <i>EcoAttitude</i> | ☺ | ☹ | ☺ | ☹ | ☺ | ☺ |
| 20 | Quizz <i>Gagnez 1000€</i> | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ |
| 21 | Quizz- <i>Qualité</i> | ☺ | ☹ | ☺ | ☺ | ☹ | ☺ |
| 22 | Quizz <i>Léo le ConsommActeur</i> | ☺ | ☹ | ☺ | ☺ | ☺ | ☺ |
| 23 | Game <i>Reflxe planetaire</i> | ☹ | ☺ | ☺ | ☺ | ☺ | ☺ |
| 24 | Guide <i>Du Consommateur Durable</i> | ☺ | ☺ | ☹ | ☹ | ☺ | ☺ |
| 25 | Website - YouthXchange towards sustainable lifestyles | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ |
| 26 | Guide - YOUTHXCHANGE | ☺ | ☺ | ☺ | ☹ | ☺ | ☺ |
| 27 | Pamphlet: Is the Future Yours? | ☹ | ☺ | ☺ | ☹ | ☹ | ☹ |
| 28 | Guide <i>Agenda Europa a Escolha é Vossa - 2006 - 2007</i> | ☺ | ☺ | ☺ | ☹ | ☺ | ☺ |
| 29 | Website - <i>Consumo responsável – para um consumo ambientalmente responsável</i> | ☹ | ☺ | ☺ | ☺ | ☹ | ☹ |
| 30 | Quizz - <i>Diploma do consumidor ecológico</i> | ☹ | ☹ | ☺ | ☹ | ☺ | ☹ |
| 31 | Game -Puzzles | ☹ | ☹ | ☹ | ☺ | ☹ | ☹ |
| 32 | Game- <i>Nao há lixo nem lixeira</i> | ☹ | ☹ | ☹ | ☺ | ☹ | ☹ |
| 33 | Report Household consumption and the environment | ☺ | ☺ | ☺ | ☹ | ☺ | ☺ |
| 34 | Website – Consumer society | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ |
| 35 | Website – <i>4r's do Consumo Sustentável</i> | ☹ | ☺ | ☺ | ☹ | ☺ | ☺ |
| 36 | Website – <i>Projecto Ecocasa</i> | ☺ | ☺ | ☺ | ☹ | ☺ | ☺ |
| 37 | Guide – <i>Projecto Edificio Verde</i> | ☺ | ☺ | ☺ | ☹ | ☹ | ☺ |
| 38 | Game – Virtual House | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ |
| 39 | Website – <i>Dia sem compras</i> | ☹ | ☹ | ☺ | ☹ | ☹ | ☹ |
| 40 | Website – Buy nothing day | ☺ | ☺ | ☺ | ☹ | ☺ | ☺ |
| 41 | Guide – <i>Um dia de consumo sustentável</i> | ☹ | ☺ | ☺ | ☹ | ☺ | ☺ |
| 42 | Quizz – Ecological Footprint Quizz | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ |

1 – fair (☹) 2 –medium (☺) 3 good (☺).

Most of the materials promote environmental awareness (71 %, fig. 3). Nevertheless assuming that increasing awareness of the issues will stimulate environmental responsible

behaviour may not be a valid assumption (Vaske and Kobrin 2001). Environmental education is essential to enhance levels of awareness and understanding of the key issues at the core of the sustainability imperative (“cognitive dimension”), promoting attitude changes (the “ethical” dimension), and modifying patterns of behaviour (the “action” dimension) (EC, 1997). Hence, for “action” dimension environmental awareness is definitely not enough, but that was not the purpose of our study.

38 % and 5 % (see pedagogy classification, fig. 3) of the materials were classified as medium or fair, respectively, considering their learning and teaching quality. The materials can be interactive and transversal, but it is fundamental that they teach us something.

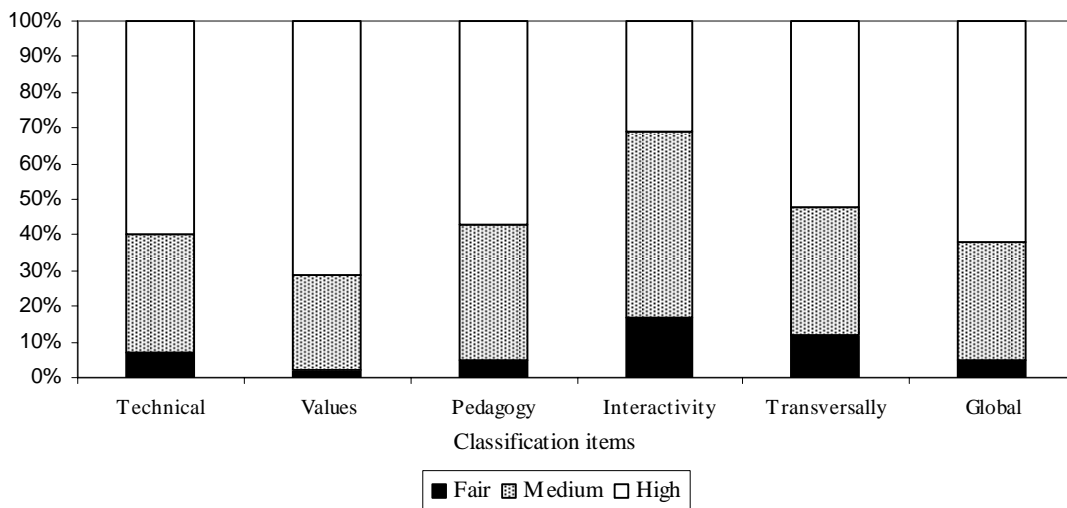


Fig. 3 – Evaluation items classification of the household sustainable consumption searched materials.

Although internet allows environmental awareness materials to be interactive only 31 % were considered with high interactivity. A significant part of the searched materials are guides, pamphlets, reports, or didactic exercise books for which interactivity in principle is low or even non-existent.

About 52 % of the materials are highly transversal since their aims approach sustainable consumptions as a whole from specific themes like energy up to responsible consumption.

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As a global evaluation 62 % are classified with high quality, although 5 % were classified as fair. Nevertheless, as written above, each classification item gave different information and each one should be taken into consideration.

This evaluation will be used as a basis for the development of Portuguese household sustainable environmental awareness materials. Those materials will include several practical activities to be developed at family environment where they will be worked by children/youngsters but in the presence of their parents, as in a non formal educational process. The extension of environmental education efforts into the broader community has attracted increasing international attention in recent years, largely in response to growing recognition that the transition to sustainable development must be seen as a lifelong project (Filho 1997 *fide* Hills 2001), involving both formal and non-formal educations experiences (Smith 1999 *fide* Hills 2001).

Final remarks

Because of the range of economic, socio-demographic, technological and other influences that shape consumption patterns, promoting more sustainable patterns requires integrated, cross-sectoral policies that give consistent messages to consumers. Despite this, household consumption today remains a peripheral issue in most OECD countries, treated in an ad-hoc fashion. Integration requires both a clearer set of policies explicitly designed to increase the environmental sustainability of household consumption in the key areas of energy, transport and waste (and water in some countries), but also more routine consideration of the potential impact on consumption patterns and environmental impacts of policies in other areas (land-use planning; energy deregulation; institutional aspects of water management). Governments should apply complementary measures where these policies, which are implemented to achieve other social objectives, are likely to have unacceptable environmental impacts (OECD 2002).

There are many options for influencing consumption patterns. This means that to promote more sustainable consumption will require a multi-stakeholder approach, including public policy, market innovation, NGO mobilisation of consumer groups, and voluntary initiatives by consumers themselves. While governments have a clear and important role to play in

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designing policy and framework conditions that stimulate all actors to make environmental aware decisions, they have an equally important role in supporting and facilitating action by other stakeholders, for example by stimulating private sector innovation, including through environmentally sound public procurement policies, or by supporting efforts of nongovernmental organisations to initiate debate and reflection on consumption trends and well-being in societies (OECD 2002).

Achieving more sustainable consumption patterns requires both business practices and government policies that broaden the range of choices and guarantee clear and reliable information open to consumers to make environmentally and ethically sound decisions. Education plays a particularly important role in catalysing this process in that it creates the underlying culture for young consumers and citizens to internalise sustainability in their personal, civic and professional choices. Education is thereby a critical complement to other social and economic policies, and for improving dissemination and implementation of new ideas and practices. This is important for a society as a whole, because understanding is the foundation for people to play a role as responsible citizens (UNEP 2006).

Internet and environmental awareness materials available through the web can be an important and easy way to contribute to educate families about the more correct sustainable consumption patterns. In this study a non-exhaustive European web survey was conducted to search and evaluate household sustainable consumption environmental awareness materials. The results of our research demonstrated that internet is a powerful tool and can contribute to aware the general public about these issues. The problem of internet downloaded materials is the lack of their quality evaluation before publicizing them as available on the web. Weaknesses were found in terms of technical, scientific quality and their ability for learning-teaching. Some of them are very rudimentary contributing few to aware to public in general. Also their interactivity could be better taking into account the currently power of web base tools.

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In: Azeiteiro, U., Gonçalves, F., Pereira, R., Pereira, M., Filho, W. L., Morgado, F. (Ed.) *Science and Environmental Education*. Peter Lang Ed. 2008 305 a 331 pp.

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In: Azeiteiro, U., Gonçalves, F., Pereira, R., Pereira, M., Filho, W. L., Morgado, F. (Ed.) *Science and Environmental Education*. Peter Lang Ed. 2008 305 a 331 pp.

Appendix

Table A1 - Household sustainable consumption awareness materials searched on the European web survey.

| | Type | Name | Theme | Entity /organization | Scope level | Aims | Description | Target-public | Web address |
|---|----------|--|---|---|---------------|--|--|----------------|---|
| 1 | Guide | Sustainable Consumption consumer guide | Shopping fair and green | ANPED – Northern Alliance for Sustainability | Europe | The project aims to make consumers even more aware of ethical and green aspects of the products they are buying. It is also to help them make a specific choice. Enabling consumers to decide on ethical and green grounds between products will greatly enforce steps to build and protect sustainable societies. | ANPED was involved in a joint project from various consumer organisations in Europe. ANPED joined the effort by co-ordinating and supporting a joint project to harmonise criteria for company assessment and to produce a joint publication assessing different products on their ethical and green performance. This project has been stopped early 2002, due to a lack of funding. The information can be outdated, but can still be useful. For an example of a consumer guide, it is possible to download a English translation of the guide that was produced by the Dutch Alternative Consumers Association. | General public | http://www.anped.org/index.php?part=26&section=workinggroups&reference=83 (November, 2006) |
| 2 | Guide | Resource Kit on Sustainable Consumption & Production (12 themes) | Advertising ecodesign, energies, food, housing, leisure, lifestyles, mobility, NICT, textiles, tourism and water. | UNEP – United Nations Environmental Program | International | The Kit aim at providing background information on a selection of themes by analysing the environmental and/or social impacts of related activities and featuring examples of good practices around the world. | The kits provide a selection of tips for individuals, companies and local authorities to put environmental principles into practice and offer a wide range of websites for further reading. They also highlight UNEP's specific activities related to each topic. | General public | http://www.uneptie.org/pc/sustain/10year/SCP_resource_Kit.htm (November, 2006) |
| 3 | Pamphlet | Washright campaign - Promoting sustainable consumption of household laundry detergents in Europe | Water energy waste | AISE – International Association for Soaps, Detergents and Maintenance products | Europe | The Washright campaign aims to provide household tips to consumers consistently throughout Europe and to advise them about washing laundry in a more environmental-friendly way. | It consists on a interactive pamphlet available on the web including tips to raise awareness of key messages (in the different European languages and with contacts of the local industrial associations) about best environmental practices related with washing laundry. The campaign was initiated in 1998 through AISE to complement the industry's work in developing products that have minimum impact on the environment while educating consumers on more efficient washing habits. | General public | http://www.washright.com (November, 2006) |

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| 4 | Website | The Chemical Home | Chemical products | Greenpeace | International | To highlights the effects of hazardous chemicals found in household products can have on the body, and to change behaviours on the consumers | Interactive website for consumers, to see which chemicals are present in our body, the household products responsible and how we can force manufacturers to use safer alternatives. A large number of different products are available and the effects on our body. The images are interactive, enabling you to discover more about the chemicals which may be accumulating in your body and the household products responsible. Products are coded in red, amber and green depending on their chemical content. | General public | http://www.greenpeace.org.uk/Products/Toxic/s/ (November, 2006) |
| 5 | Website | <i>Ozonalia</i> | Responsible consumption and Fair trade | Spanish UNICEF | Country (Spain) | Improve children environmental awareness about responsible consumption and fair trade and to show how certain processes and social events occurring in under developing countries affect our society. | Interactive website for the children awareness about responsible consumption and fair trade with games, news, definitions, didactic activities and sales of fair trade products | Children's | http://www.ozonalia.org/principal.htm (November, 2006) |
| 6 | Quizz | <i>¿Eres um consumidor responsable?</i> | Responsible consumption | Spanish UNICEF | Country (Spain) | Improve children environmental awareness about responsible consumption | Simple game with questions a about responsible consumption | Children's | http://www.ozonalia.org/planeta_ozonalia.htm (November, 2006) |
| 7 | Game | <i>Compro luego penso</i> | Responsible consumption | Spanish UNICEF | Country (Spain) | Improve children environmental awareness about responsible consumption | Simple game about buying an product in an sustainable way | Children's | http://www.ozonalia.org/planeta_ozonalia.htm (November, 2006) |
| 8 | Game | <i>Los 4x4 insolidarios</i> | Responsible consumption | Spanish UNICEF | Country (Spain) | Improve children environmental awareness about differences in environmental problems associated with different products | Simple game about environmental problems associated with 4x4 offroaders | Children's | http://www.ozonalia.org/planeta_ozonalia.htm (November, 2006) |
| 9 | Game | <i>Los jugetes, ¿se tienen que comprar?</i> | Responsible consumption | Spanish UNICEF | Country (Spain) | Improve children environmental awareness about toys reuse | Simple game about toys reuse. | Children's | http://www.ozonalia.org/planeta_ozonalia.htm (November, 2006) |
| 10 | Game | <i>El patalon viagero</i> | Responsible consumption | Spanish UNICEF | Country (Spain) | Improve children environmental awareness about responsible consumption | Simple game about how far our products can be manufactured | Children's | http://www.ozonalia.org/planeta_ozonalia.htm (November, 2006) |
| 11 | Movie | <i>Papel reciclado</i> | Fair trade | Spanish UNICEF | Country (Spain) | Improve children environmental awareness about paper recycling | Simple movie about how to recycle paper. This movie is within the theme of fair trade | Children's | http://www.ozonalia.org/planeta_ozonalia.htm (November, 2006) |

In: Azeiteiro, U., Gonçalves, F., Pereira, R., Pereira, M., Filho, W. L., Morgado, F. (Ed.) *Science and Environmental Education*. Peter Lang Ed. 2008 305 a 331 pp.

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|----|------------------------|--|---|--|------------------|---|---|----------------|--|
| 12 | Game | <i>¿Quánto sabes de comercio justo?</i> | Fair trade | Spanish UNICEF | Country (Spain) | Improve children environmental awareness about fair trade | Simple game about what is fair trade | Children's | http://www.ozonalia.org/planeta_ozonalia.htm (November, 2006) |
| 13 | Game | <i>Sopa de letras</i> | Fair trade | Spanish UNICEF | Country (Spain) | Improve children environmental awareness about fair trade | Simple game about fair trade related words | Children's | http://www.ozonalia.org/planeta_ozonalia.htm (November, 2006) |
| 14 | Didactic exercise-book | <i>Cuaderno Didáctico UNICEF-Comité Regional de Murcia</i> | Responsible consumption and Fair trade | Spanish UNICEF | Country (Spain) | Improve children environmental knowledge and awareness about responsible consumption and fair trade | Didactic exercise-book with definitions, explanations, activities and questions about responsible consumption and fair trade, conducted by the <i>Comité Regional de Murcia</i> | Children's | http://www.ozonalia.org/planeta_ozonalia.htm (November, 2006) |
| 15 | Didactic exercise-book | <i>Unidades didácticas</i> | Responsible consumption and Fair trade | Spanish UNICEF | Country (Spain) | Improve children environmental knowledge and awareness about responsible consumption and fair trade | Didactic exercise-book with definitions, explanations, activities and questions about responsible consumption and fair trade. | Children's | http://www.ozonalia.org/planeta_ozonalia.htm (November, 2006) |
| 16 | Didactic exercise-book | <i>Cuaderno Didáctico Castilla-La Mancha</i> | Responsible consumption and Fair trade | Spanish UNICEF | Country (Spain) | Improve children environmental knowledge and awareness about responsible consumption and fair trade | Didactic exercise-book with definitions, explanations, activities and questions about responsible consumption and fair trade; same exercises as Murcia although with some data about fair trade in <i>Castilla-La Mancha</i> | Children's | http://www.ozonalia.org/planeta_ozonalia.htm (November, 2006) |
| 17 | e-conference | Sustainable production and consumption project | Sustainable production and consumption | International Association for Sustainable Development and Government of Norway | International | To conduct a Virtual Policy Dialogue on Sustainable Production and Consumption. The purpose of the Dialogue was to seek knowledge and viewpoints from around the world, to inform the Government of Norway, and other governments, as they begin to address the challenges put forth by Chapter 4 of Agenda 21. | Three e-conferences (already conducted) about sustainable production and consumption to enlarge the dialogue among researchers, bureaucrats and citizens. It has moderator who gives an introduction and address questions. People must register in the web to participate in the discussions. We can have access to some of the web discussions. | General public | http://www.iisd.org/susprod/virtualpolicy.htm (November, 2006) |
| 18 | Guide | <i>Idea Sana – Consumo sostenible</i> | Food, housing, mobility, tourism, waste, energy, water, and fair trade. | Fundación Eroski | Country (Spain) | To generate attitudes to promote sustainable consumption aiming a healthy life stile. | A guide with definitions and tips to change consumers patterns and improve the life stile in terms of food, housing, mobility, tourism, waste, energy, water, and fair trade. Lessons are given in the different shopping center within "Idea Sana" project of Fundación Eroski. | General public | http://ideasana.fundacioneroski.es/web/es/11a/escuela_3/ (November, 2006) |
| 19 | Quizz | <i>EcoAttitude</i> | Sustainable consumption | ConsoDurable.org | Country (France) | Draw a national profile of sustainable consumption in | National questionnaire for individuals aiming to draw a French profile on | General public | http://www.consodurable.org/ecoattitude/eco3.php |

| | Type | Name | Theme | Entity /organization | Scope level | Aims | Description | Target-public | Web address |
|----|---------|---|--|---|-------------------|---|--|---|--|
| | | | | | | France | sustainable consumption | | (November, 2006) |
| 20 | Quizz | "Gagnez 1000€" | savings/ transportation, energy, garden, food, water, heat and shopping | CRIOC-Centre de Recherche et d'Information des Organisations de Consommateurs | Country (Belgium) | Promoting savings on families' bills and sustainable consumption | Retro-decoupage-style presentation including test on the family's annual savings as consumers in the perspective of sustainable consumption, with advice on different themes (transportation, energy, garden, food, water, heat and shopping); | Families | http://www.oivo-crioc.org/fr/ (November, 2006) |
| 21 | Quizz | Quizz- Qualité | Eco-Labels | Association Léo Lagrange pour la Défense des Consommateurs | Country (France) | Evaluating consumer knowledge about consumption information | Inter-active questionnaire about quality environment and certification process. Comments on right/wrong answers | General public | http://www.leolagrange-conso.org/ (November, 2006) |
| 22 | Quizz | Léo le Consommateur | Sustainable consumption attitudes towards energy, food, transportation, shopping, water, waste and leisure | Association Léo Lagrange pour la Défense des Consommateurs | Country (France) | Promote adequate sustainable consumption attitudes | Illustrated Quizz with downloadable help guide about energy, food, transportation, shopping, water, waste and leisure and comments on right/wrong answers | Family/Children | http://www.leolagrange-conso.org/ (November, 2006) |
| 23 | Game | Reflexe planetaire | electricity, waste, water, transportation | ADEME-Agence de l'Environnement et de la Maîtrise de l'Energie | Country (France) | Promote adequate sustainable consumption attitudes | Interactive game about children's behavior at home until going to school | Children's 7-12 years old | http://www.ademe.fr/particuliers/jeux_2006/REFLEXE_PLANETAIRE/sommaire.html (November, 2006) |
| 24 | Guide | Le Guide Du Consommateur Durable | Sustainable consumption | Institut National de la Consommation | Country (Belgium) | Promoting French people awareness of consumer attitudes towards sustainable development | Downloadable guide on sustainable development, individual and collective attitudes concerning consumption in several areas. | Consumer organizations and general public | http://www.conso.net/page/bases.1_pour_comprendre_agir.5_dossiers.8_le_guide_du_consommateur_responsable./ (November, 2006) |
| 25 | Website | YouthXchange towards sustainable lifestyles | Responsible consumption | UNEP-UNESCO Partnership on Youth & Sustainable Lifestyles | International | Empowering young consumers for a better world | Training kit on responsible consumption, produced by the UNEP-UNESCO Partnership on Youth & Sustainable Lifestyles. The kit is made up of a guidebook and a website, highlighting the interrelated nature of sustainable consumption using a multi-disciplinary approach covering issues on environment, ethics, and economics. The kit provides young people with tools and resources that allow them to network towards sustainable consumption. | Young | www.unep.org/tunza/youth/Join_Hands/YouthXchange/index.asp (November, 2006) |

In: Azeiteiro, U., Gonçalves, F., Pereira, R., Pereira, M., Filho, W. L., Morgado, F. (Ed.) *Science and Environmental Education*. Peter Lang Ed. 2008 305 a 331 pp.

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|----|----------|---|---|---|-------------------|--|---|-------------------------|---|
| 26 | Guide | YXC guide - empowering young consumers for a better world! | Responsible consumption | UNEP-UNESCO Partnership on Youth & Sustainable Lifestyles | International | Through YOUTHXCHANGE, UNEP and UNESCO try to show young people that it is possible for all of us to translate our aspirations for a better world into everyday actions | This guide and the related website are intended as a tool kit to help trainers involve young people. It has been designed to assist youth groups, NGOs and teachers to help raise awareness of sustainable consumption and empower youth to put theory into practice. We should look at what and how we produce and consume. But in order to do so without too much cost, we - as consumers - need: <ul style="list-style-type: none"> • clear information; • accessible sustainable products & services; • adequate infrastructures. | Young | www.youthxchange.net/ (November,2006) |
| 27 | Pamphlet | Is the Future Yours? | Sustainable consumption | UNEP | International | It's your world accept nothing less – let's explore our lifestyles and try to make our choices more conscious. | Is a pamphlet about simple suggestions about our life style and what we can do to make our choices more conscious, and this way make our consumptions more sustainable. | Young | www.uneptie.org/pc/sustain/reports/youth/brochure-english.pdf (November, 2006) |
| 28 | Guide | <i>Agenda Europa a Escolha é Vossa - 2006 - 2007</i> | Consumption in general, including sustainable consumption | DECO | Portugal / Europa | The specific aim of the Europa Diary is to encourage young people in the European Union to become more aware as consumers, by getting them to work and reflect on consumer-linked themes in teams under adult guidance on a regular basis. | The Europa Diary is an EU-wide initiative to inform young people of their rights, increase their awareness and to enable them to make more informed decisions as consumers. | Young 15 – 18 years old | http://ec.europa.eu/consumers/cons_info/cons_diary0607/agenda2006_pt.pdf (November, 2006) |
| 29 | Website | <i>Consumo responsável – para um consumo ambientalmente responsável</i> | Sustainable consumption | DECO Juvenil | Portugal | Empowering young consumers for a sustainable consumption | Website with general information about sustainable consumption, and some tips and games to help improve our way of consumption | Youth | www.deco.proteste.pt/Interactive/decojuvenil/index.html (November, 2006) |
| 30 | Quizz | <i>Diploma do consumidor ecológico</i> | Sustainable consumption | DECO Crianças | Portugal | Improve children environmental awareness about responsible consumption | Quizz about the general habits of consumption. In the end it is possible to obtain a diploma of sustainable consumption if the answers are good. | Children's | www.deco.proteste.pt/Interactive/decojuvenil/index.html (November, 2006) |
| 31 | Game | Puzzles | Sustainable consumption | DECO Crianças | Portugal | Improve children environmental awareness in general | Two different puzzles, very simples, one with a positive image and the other with a | Children's | www.deco.proteste.pt/Interactive/decojuvenil/index.html |

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|----|---------|---|--------------------------|----------------------|-------------|---|--|---|---|
| | | | | | | | negative image about the environment. | | (November, 2006) |
| 32 | Game | <i>Nao há lixo nem lixeira</i> | Waste recycling | DECO Crianças | Portugal | Improve children environmental awareness about recycling correctly the waste. | It's a game about urban waste recycling | Children's | www.deco.proteste.pt/Interactive/decojuvenil/index.html (November, 2006) |
| 33 | Report | Household consumption and the environment | Sustainable consumption | EEA | Europe | The principal aim is to provide input for European policy-making, this report analyses the environmental effects of household consumption in Europe. | In this report they identify four consumption categories that form a major part of our total consumption expenditure and for which the environmental effects are either large or increasing rapidly. These are consumption of food and drink; housing; personal travel and mobility; and tourism. Attaining more sustainable consumption and production patterns is a common challenge that involves all actors, including public authorities at all levels, business and consumers. | Consumer organizations and public local consumer centers and general public | http://reports.eea.europa.eu/eea_report_2005_11/en (November, 2006) |
| 34 | Website | Consumer Society | Sustainable consumption | Toyota | Europe | Consumer Society - When looking at European consumption as a whole, households consume 25-30 percent of all fresh water, 20 percent of all electricity and over 70 percent of manufactured goods. | Website with information about the consumer society and types to consume less, with dilemmas that help to decided the better options to a sustainable consumption and lessons plans that can be used by teachers and developed the themes: Why by more? Packaging; Labels and advertising; and Property. | Families Teachers Youth | http://greenpack.rec.org/consumer_society/index.shtml (November, 2006) |
| 35 | Website | <i>4r's do Consumo Sustentável</i> | Sustainable consumption | Évora University | Portugal | Empowering young consumers for a sustainable consumption | Website with two didactic exercises for young students to answer by email, and links to Brazilian website. Only the didactic exercises were evaluated in this study. | Young students | http://www.minerva.uevora.pt/publicar/4rs/index.htm (November, 2006) |
| 36 | Website | <i>Projecto Ecocasa</i> | Energy | Quercus | Portugal | Information about several options to save energy inside our homes | Examples to save energy inside the houses; constructed sustainable solutions; Renewable energies and Ecofamilies. | General public | http://www.ecocasa.org (November, 2006) |
| 37 | Guide | <i>Projecto Edifício Verde</i> | Sustainable construction | Quercus | Portugal | Project of an example of sustainable construction | This association uses the opportunity to construct the new organization building to develop a project of rehabilitation of an old building. Within this rehabilitation they wrote a guide about sustainable construction with examples of sustainable construction materials, energetic autonomy, raising efficiency and decreasing | General public | http://www.quercus.pt/xFiles/scContentDeployer_pt/docs/Doc1439.pdf (November, 2006) |

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| | | | | | | | environmental impact assessment. | | |
| 38 | Game | <i>Virtual House</i> | Sustainable consumption and preservation of biodiversity | WWF | International | Game of awareness about the household consumption to preserve the biodiversity | Virtual house, with questions about preservation of biodiversity and other global problems, and the answers are inside a room of the house and are connected of the consumption of some goods or domestically behaviors. The answers are followed by explanations of the theme. | General public | www.virtualhouse.org/game.cgi?iw=o&o=sb&r=c&q=3&t=1 (November, 2006) |
| 39 | Website | <i>Dia sem compras</i> | Sustainable consumption | Gaia | Portugal | Empowering the public about the responsibility of a sustainable consumption | Clues to conduct to a sustainable consumption- commemoration of the nothing by day. | General public | http://gaia.org.pt/semcompras/menu.html (November, 2006) |
| 40 | Website | <i>Buy nothing day</i> | Sustainable consumption | ONG's | United Kingdom | Empowering the public about the responsibility of a sustainable consumption | Clues to conduct to a sustainable consumption- commemoration of the buy nothing day. | General public | www.buynothingday.co.uk/index.html (November, 2006) |
| 41 | Guide | <i>Um dia de consumo sustentável</i> | Sustainable consumption | DECO LIPOR | Portugal | Awareness about the household sustainable consumption to preserve the environment | These guide present very simple examples to transform the diary consumption in a sustainable consumption and in this way preserve the environment. | General public | http://www.bcsdportugal.org/content/index.php?action=articlesDetailFo&rec=389 (November, 2006) |
| 42 | Quizz | Ecological footprint quizz | Sustainable consumption | Earthday Redefining Progress | International | Ever wondered how much "nature" your lifestyle requires? You're about to find out. | This Ecological Footprint Quiz estimates how much productive land and water you need to support what you use and what you discard. After answering 15 easy questions you'll be able to compare your Ecological Footprint to what other people use and to what is available on this planet. | General public | http://www.earthday.net/footprint/index.asp (November, 2006) |