Ecosystem Health and Sustainable Agriculture

Rural Development and Land Use

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Voluntary Instruments and Sustainable Consumption

Economic Level and Environmental Impact

Consumer Behaviour
The core concept in sustainable development is to ensure the conditions for the present and future generations to obtain a good living. However, in attempting to find a balance between human welfare, economics and the environment, it soon becomes apparent that there are different views on what a ‘good living’ comprises and how it can be secured for this and future generations.

Individuals, households and groups acting independently have a great impact on the environment. For example, it is estimated that consumer behaviour on household level accounts for slightly less than half the carbon emissions in the US (Cutter et al., 2002). Individual choices also have a significant direct impact in the areas of transportation, housing, energy-using appliances, solid waste, water and food (National Research Council, 2005). Recent results from Denmark show that Danish households contribute to air pollution mainly through consumption of fuel in private vehicles, consumption of electricity, consumption of different alternatives for heating, consumption of food and consumption of different recreation and entertainment activities (Wier et al., 2003).

Environmental quality is also indirectly influenced by individuals and more or less independent groups in their roles as voters and citizens, households, investors, leaders, small business entrepreneurs, experts, researchers and members of non-profit organisations.

It is obvious that farmers have a great impact in rural areas. In areas where farming is a family business, which is the case in most Scandinavian, Polish, German and three Baltic states, the decisions made by individual farm households are very much connected to the private finances of the farming family. The decisions made by family farms are comparable with household individual/voluntary decisions.

Lifestyle and Environmental Impact
The impact on the environment of individual households mainly depends on their standard of living, but is also greatly influenced by values and personal lifestyle. The study from Denmark referred to above showed that type of housing and consumer age have the greatest impact (Wier et al, 2003). Young people living in flats within urban areas have the least impact on environmental air pollution, mainly because of their low consumption of cars for transport and household energy for heating in the winter time.
Thus, a person who voluntarily wants to contribute to low environmental impact will choose to have no car and only travel by bicycle, on foot or by public transport and will live on a low technological and energy-consuming level, with holidays only spent in the local area. On the other hand, many strive for a lifestyle that is very bad for the shared environment, e.g. using the most comfortable transport, living in large detached houses outside the city and spending all their holidays in exotic and expensive resorts.

Most of us would claim to have chosen a lifestyle somewhere in between, for reasons that are obvious and important to us. What could make us change our behaviour? What voluntary activities are most effective as drivers of change?

As an example relevant to rural areas, we can study the recent increase in the number of private cars in the Baltic Sea region (see Figure 26.1). Owning a car is a lifestyle component considered absolutely essential by many consumers. The private car is often needed for individuals and families to be able to live a reasonably good life in sparsely populated areas.

**Car Ownership and CO₂ Emissions**

Of course, well-planned infrastructure would include good public transport in all parts of the country. However, this is not the case except in the vicinity of the largest cities in the most developed areas. Even if consumption behaviour in different countries of the Baltic Sea region is uneven today when it comes to motorisation, most people in all these countries would regard having one car per family as the minimum for living a good life. Is this ideal possible? Elsewhere we have shown that passenger cars emit carbon dioxide, and their manufacture requires metals such as aluminium and platinum, which are limited resources and demand large amounts of energy to be produced. The European level of CO₂ emissions in 1990 must comply with the Kyoto Protocol. However as Figure 26.1 shows, all the countries in the Baltic Sea region have increasing numbers of cars, despite recent increases in fuel prices and taxes. In 2012, the price of car fuel in Sweden was around 1.6 Euro per litre.

In 2009 Russia had 225 private cars per 1,000 inhabitants. However, the steady increase in economic growth in Russia indicates that this number will increase rapidly. During the past 10 years, there has been 50-100% increase in the number of private cars in the three Baltic countries and Poland (Figure 26.1). In Scandinavia, the numbers of cars is approaching the level of 1 car for every other citizen, which is a level already passed 10 years ago in Germany.

Since the Kyoto Protocol Agreement was signed by most countries in Europe and other countries with high consumption, there has been a slow but steady downward trend in CO₂ emissions. The need for a reduction in greenhouse gases is agreed among climate experts, but the questions are how this can be implemented, and by whom. All or no-one is responsible, but obviously Denmark, Germany, Norway and Japan will have to work hard to reach their targets, while Estonia still is far below its target. The US did not even sign the Kyoto Protocol, despite having a greater impact on global greenhouse gas emissions than most other countries.

Greenhouse gas emissions from countries in economic transition around the Baltic Sea rapidly increased during
the 1990s and early 2000s, especially in Estonia, Latvia, Lithuania and Poland. The debate on lifestyles and the need to voluntarily restrict the use of cars has apparently has yet become an issue in these countries. In fact it is unlikely to become an issue until the number of cars is equal to that in neighbouring countries.

Within the Baltic Sea region, there is a division between more and less wealthy countries. In the former Soviet Bloc countries, both those within the EU and those outside it, economic development and consumption are increasing rapidly but there is a fairly wide gap between rich and poor, so that the poorest people have not really had much opportunity to consume more than they used to in the past.

What is Voluntary?

Individual Choice and Responsibility

For an individual to make sensible voluntary choices, such as choosing to have the first, second or third car for the household, information and awareness are needed so that such choices are made consciously and deliberately. However, unconscious behaviour can also have a strong impact on choices and keeps individuals tied to habits that may sometimes be good but more often are bad (an example of the latter being gambling, which can destroy individual health, family finances and personal relationships.

Thus, the first step for a person who wants to make better voluntary choices is to develop critical thinking. The disadvantage of this is that the person must feel responsible for their conscious choices. Energy is required to observe, think, enquire and plan, prior to investing money or effort in buying new things or changing consumption pattern.

The moment of choice is always NOW. If individuals do not make their own choices, there will inevitably be someone else who will do this for them, or they will fall

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Figure 26.3. Final consumption per capita in USD adjusted by purchasing power parities*, year 2010. Data from UNECE, 2012.

* Purchasing Power Parity (PPP), NCU per US$: In broad terms, PPP is the relative cost of the same representative basket of goods when valued at the domestic prices of two different countries. In other words, PPPs are the rates of currency conversion that equalise the purchasing power of different currencies. A PPP is similar to a consumer price index in that it compares an overall price level of two different economies. It is different, however, in that the two economies compared are separated in space rather than in time. PPPs are, therefore, currency converters in addition to being spatial price comparisons. When countries share a common currency, such as the twelve countries of the euro area, and there is no need to convert to a common currency, PPPs are simply spatial price relatives. PPPs, and not exchange rates, should be used in international comparisons of real income.
into the trap of doing what they have always done (unconscious behaviour/habit).

A voluntary choice is something done because the individual WANTS it (i.e. has values and goals that match this choice). Other people may provide advice, but individuals can never blame others for their choices if they have made these consciously. This means having to distinguish between opinions and facts and understanding the limits for the choices made (e.g. laws, physical ability, long-term economic regulations, etc.). It also means being very aware of the source of the facts influencing choices. Such facts should be reliable and understandable.

The Reasons for Choices?
An individual voluntary choice could be good for the individual, but at the same time have a negative impact for many others. Thus personal choice is seldom based entirely on the individual’s own desires and dreams, but must take into account how it will affect family, neighbours, friends and society as a whole. Very often individual choice becomes a group choice, and when group dynamics are involved, different specific psychological processes within the group will influence the choice.

Voluntary driving forces for changing behaviour are described by Stern (2002). Some additions to his suggestions are provided below (see also Figure 26.4). Examples are given for each suggested driver of behaviour:

1. **Personal capabilities and constraints**: Literacy, social status and professional skills affect judgement capacity; personality, and habits determine unconscious behaviour.
2. **Value (ethical/political) arguments**: e.g. a vegan does not eat meat or even buy leather shoes
3. **Lifestyle (identity) arguments**: A high-ranking business person most often drive a high status car.
4. **Group dynamics arguments**: Individuals with higher status in the group have a stronger voice than those with lower status, and sometimes the norms of the group are more important than individual opinions.
5. **Convenience arguments**: When it is too much effort to learn which food is most environmental friendly I buy what is more tasty.
6. **Technological feasibility arguments**: Electric cars are much more environmentally friendly but the batteries must be charged more often.

7. **Private economic arguments**: If going by train costs four times as much as driving, even the environmentalist will choose the car.
8. **Private contract arguments**: A private agreement such as cooperation on the management of a shared water source with a neighbour.
9. **Forcing arguments (institutional and legal)**: Legal constrains may result in more sustainable behaviour.

Voluntary Measures will Succeed when They Show Social and Economic Benefits

The Role of Non-Governmental Organisations
There are benefits for society as a whole when individuals in that society use voluntary measures for change. Individual voluntary research or critical reports, newspaper articles, letters to the editor, etc. by individuals often reveal problems that need to be tackled by society even before politicians or the media are aware of these problems. Thus, individuals or Non-Governmental Organisations (NGOs) often act as whistle-blowers. If environmental activists organise in large groups, they can have a large impact in opinion-forming and they often play a lobbying and ultimately a political role. Voluntary measures such as waste sorting and household recycling were first started by individuals and are now a major task for city councils. The recycling and reuse of resources is of high economic importance since it reduces the costs of
Policy Instruments and Governance

Box 26.1. Sustainable Consumption

In the last fifty years the world has experienced an exceptional increase of consumption. In addition the population of the world is increasing. All of this consumes resources which are limited and scarce.

Consumption may represent different kinds of activities to different people and different places in the world. The social dimension of consumption is important. Consumption may be seen as ‘not just a matter of satisfying material greed, or filling your stomach. It is a question of manipulating symbols for all sorts of purposes’ (Bauman, 1992: 223).

It is a commonly accepted fact that current consumption and production systems are not compatible with a sustainable society and has considerable negative environmental consequences, including emissions of greenhouse gases, pollution, reduction of water supplies, and reduction of biodiversity. (Michaelis and Lorek, 2004). Thus, we now need to promote sustainable consumption.

Definitions of Sustainable Consumption
It is difficult to usefully define sustainable consumption. Here we will see sustainable consumption as “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”. This definition was established at the groundbreaking Symposium on Sustainable Consumption in Oslo, Norway in 1994). The definition was subsequently adopted by the UN Commission on Sustainable Development in 1995.

Sustainable consumption is thus an umbrella term which brings together many issues. We could discuss it in terms of social and environmental impact of consumption practices, consumer rights and responsibilities, sustainable consumption behavior, sustainable lifestyles and households, sustainable consumption challenges in agriculture, consumption reduction, sustainable products/service substitutions, and consumers as recyclers.

Rights and Responsibilities of Consumers
To achieve sustainable development through sustainable consumption we should be aware of our rights and responsibilities as consumers. According to Consumer International (CI, 2007), formerly International Organization of Consumers’ Union (IOCU 1987), the basic consumer rights and responsibilities include (shortened descriptions):

• The right to satisfaction of basic needs.
• The right to safety - to be protected against products hazardous to health or life.
• The right to be informed - to be given facts needed to make an informed choice.
• The right to choose - to be able to select from a range of products and services.
• The right to be heard - to have consumer interests represented.
• The right to redress - to receive a fair settlement of just claims.
• The right to consumer education.
• The right to a healthy environment.

Consumer responsibilities include:
• Solidarity: The responsibility to organize and protect our interests.
• Critical Awareness: The responsibility question price and quality of products.
• Action: The responsibility to assert and act to get a fair deal.
• Social Concern: The responsibility to be aware of impact of consumption on other citizens.
• Environmental Awareness: The responsibility to understand the environmental consequences of our consumption.

How to Promote Sustainable Consumption
We, as consumers, have to behave in a way that will promote sustainable consumption. One has to be a responsible consumer, a socially aware consumer, a consumer who thinks ahead and tempers his or her desires by social awareness, a consumer whose actions must be morally defensible and who must occasionally be prepared to sacrifice personal pleasure to communal well-being (Gabriel and Lang, 1995: 175-176). We can reduce the impact of our food consumption by: eating more vegetables, fruits, and grains and less meat; eating meat that is produced in the least harmful way—grass fed, organic, antibiotic- and hormone-free; giving preference to organic foods; buying in bulk to reduce packaging; avoiding disposable paper and plastic products; using reusable appliances; and buying from small, local sources whenever we can (Sierra Club).

Sustainable consumption of energy demands us to be more efficient in producing and consuming energy. We have to find out and develop alternative and renewable sources of energy. Care should be taken to reduce the use of fossil fuels.

A lifestyle of environmentally friendly consumption may also include taking care of environmental effects of consumption. With this in mind one could for instance use environmentally friendly products, manage waste by separating and recycling, reduce one’s impulse buying, etc. However, there is no single formula for sustainable lifestyles (Autio and Heinonen, 2004).

Governments and different non-government international bodies also have responsibilities to behave as promoters of sustainable consumption and to formulate policies and regulations supporting sustainable development through sustainable production and consumption.

Trade-off Between Consumption and Environmental Impact
The main challenge of sustainable development may be to find consumption behaviors that minimizes environmental impact. Thus we should try to find a trade-off between consumption and its impacts on environment. This is not an easy task. Experts have identified that there is a lack of political will and lack of information about sustainable consumption and production patterns. Furthermore, prices do not reflect environmental and social costs and often governmental subsidies are given to unsustainable activities. There are important barriers such as lack of technology transfer and of capacity building (UNEP and CI, 2002). However, there are also some positive examples. In Scandinavia, deposit schemes for glass, plastic and packages and many other fractions exists since many years. In many municipalities also including rural areas. This type of local service is spreading to many other countries. Thus, recycling of waste could be one of many practical ways to reduce the resource consumption.

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waste collection and management of landfills. Some of the reused material is economically valuable for private firms, one example being the reuse of newspaper in paper mills.

NGOs can be very different from each other. They can be based on religious, political, ethical, neighbourhood or other common values. Within the Baltic Sea Region there are for instance clear religious divides between Protestant/Catholic and Russian Orthodox Christians, giving rise to group pressure, traditions and habits that affect consumer attitudes and choices very strongly and very differently in various local contexts.

However, tradition/history is perhaps the most important factor for both individual and group choices. The most obvious voluntary choice made by individuals in the former Soviet states since the Soviet Union separated into independent states in 1990 is the large number of people moving from rural to urban areas, especially in Russia. This reaction to the living conditions in rural areas started very soon after 1990 (Libert, 1995, p. 163) and has continued up until now, in many cases leaving totally empty villages and uncultivated farm land, but the signals to governments from this ‘voluntary behaviour’ should be very strong: Something is fundamentally wrong in the rural development policies of these countries.

Voluntary Measures Must be Based on Good Quality Information

Information is needed in order for individuals to make better choices, and the role of society is to make this information as effective as possible.

Individual decisions should ideally be based on economic considerations, availability, attitudes and trustworthy information. Thus society needs to secure funding for independent research. Important characteristics of essential information that must be supported by governmental agencies are (Wilbanks and Stern, 2002):

- Information quality and reliability should be ensured
- Broader citizen involvement should be encouraged
- Voluntary action should be catalysed and supported (to ensure an inflow of corrections and new ideas to politicians and scientists)
- The capacity to act effectively should be improved
- Voluntary partnerships should be promoted (e.g. Finnish National Commission on Sustainable Development (FNCSD, 2007).

Consumer Action

Consumer action is a more active form of voluntary action than just choice of consumption, acting as a driver for change to more environmentally sound behaviour of individuals and households. One example of this is the action introduced by e.g. Greenpeace to refuse to buy cod from the Baltic Sea due to overfishing (Greenpeace, 2006). Another example is the action by animal rights groups against animal fur producers.

Funding of Voluntary Organisations

Individual actions, NGOs, independent studies, etc. are often the result of individual initiative. For example, NGOs are generally funded by membership fees and voluntary financial donations.

An example of an economically very important individual initiative is the creation of the Soros foundation, the Open Society Institute, in the 1980s. The Soros foundation in turn has funded many NGO-type voluntary initiatives and also independent studies in central and eastern Europe.

Voluntary Measures in the Rural Sector

Corporate Social Responsibility (CSR)

Business principles and codes of conduct can make a difference in the business sector, but only if this is demanded by consumers. Thus, business may introduce some voluntary market-specific measures for marketing and business reasons, but never to the extent that economic margins are substantially reduced.

Corporate social responsibility (CSR) can be defined as voluntary action by businesses over and above compliance with minimum legal requirements, in order to address their own competitive interests and the interests of the wider society.

Eco-labelling of Agricultural and Other Rural Products

Some 15-20 years ago, a debate began in Scandinavia on the pollution of lakes, rivers and the sea by paper mills.
At that time, most of the paper produced was bleached using chlorine, which was very detrimental to water ecosystems. Prompted by this debate in the media and action by environmental organisations, the industry very quickly developed alternative methods for bleaching and today chlorine-bleached paper has disappeared from the market.

Recently, many private enterprises in Scandinavia, Germany and North America have started to label their products to meet the expectations of the environmentally-conscious minority of consumers. For instance, in Sweden 8% of agricultural land is used for organic farming and the demand for some organic products the demand cannot be met. Eco-labelling systems have been developed, mainly for forestry, organic agriculture, mining, fishing, timber, paper mills and textile fibres.

Many of the major supermarkets in Scandinavia, e.g. COOP, ICA, Willy’s etc., aim to meet consumer demand for products produced in organic farming systems and/or with a label showing that the product is produced under socially fair circumstances. This labelling is voluntary and is provided sometimes within the supermarket’s own trademark system, sometimes in cooperation with other actors. Lobbying organisations have started their own labelling philosophy and are working to make it more widely known and accepted by different food trade actors. One example is the fair-trade label, where the premium on the product indicates that the workers involved in agricultural production, processing, storage, transport and packaging have decent working conditions and wages.

Agricultural products with such voluntary labelling that have significant market share include dairy products, meat, eggs, fruit, vegetables, bread, flour, jam, canned vegetables, tea, etc. However, there is higher demand for organic products than for fair-trade products. The highest percentage of voluntary labelling exists for dairy products; e.g. in 2007 organic farmers produced about 6% of Swedish milk (Swedish Dairy Association, 2007). Today other products are under debate. For example, products with large amounts of ‘built-in’ energy (beef, bottled water) are heavily criticised by environmental organisations.

This pattern of conscious consumer demand can generally be seen in Western Europe and North America, i.e. in countries with a high standard of living. Similar trends have only been seen in the largest cities of Poland, the Baltic States and Russia, while in Belarus and Ukraine they do not yet exist. Voluntary labelling has increased in the EU-25 area, from 11 systems in 1997 to 478 in 2007, most of these issued in Italy, France and Germany (Eurostat, 2007c). A more comprehensive way to ensure sustainable development with respect to all different aspects of economic, social and ecological sustainability is for an organisation or private firm to voluntarily join an environmental management and/or environmental certification system.

Voluntary, Economic and Policy Issues Need to Go Hand in Hand
Information, communication and dissemination of legislation, political measures and economic incentives are needed for the individual or group to make an informed choice. Thus, voluntary measures largely depend on what is decided in the surrounding society locally, regionally, nationally and internationally. The need for information and communication between different levels calls for increased networking and continuous updating of information. There must also be legislation in place to ensure communication of independent information, stop criminal acts and stop the most aggressive types of marketing of products that clearly undermine health or the environment.

Chapter 26

National Sustainable Agriculture Coalition. http://www.sustainableagriculture.net/ (retrieved 20120925)
Swedish Dairy Association: http://www.svenskmjolk.se/ (retrieved 20120925)

Further Reading

General
Baltic Sea Secretariat for Youth Affairs http://www.balticsea-youth.org/
International Human Dimensions Programme on Global Environmental Change http://www.ihdp.unu.edu/ (accessed May 2012)
Worldwatch Institute http://www.worldwatch.org/ (accessed May 2012)

Research Foundations

NGOs
Coalition Clean Baltic for Protection of the Baltic Sea Environment – a network of major national grassroots environmental organisations representing in total around half a million members: http://www.ccb.se/ (accessed May 2012)

Greenpeace: http://www.greenpeace.org/ (accessed May 2012)

Corporate Social Responsibility
The UK government gateway to Corporate Social Responsibility http://www.csr.gov.uk/ (accessed May 2012)

Management Systems and Certification